

PLANNING SHEETS

Alden Products planning sheets are full scale reproducible sheets available at the customers request for fast, convenient planning of his layouts. Below is a list of various types.

Order Number	Planning Sheet
PICS-2FP	2" Front Panel
PICS-4FP	4" Front Panel
PICS-8FP	8" Front Panel
PICS-2C	Template for punching 2" Chassis
PICS-4C	Template for punching 4" Chassis
PICS-8C	Template for punching 8" Chassis
PICS-SUL	Alden Serve-a-Unit Lock
PICS-MSUL	Alden Miniature Serve-a-Unit Lock
UPS-3	"20" Packages with Terminal Card Layout #650-20-2
UPS-4	"20" Packages with Terminal Card Layout #650-20-1 or #650-20-3
UPS-11	"11" Packages with Terminal Card Layout #650-11-1
UPS-7/9	"7" and "9" Packages with Terminal Card Layout #650-7-1 and #650-9-1
UPS-1A	Alden Basic Chassis Card #650ATMS-1
UPS-1B	Alden Terminal Card Mounting System-Card #650ATMS-1B
PCS-1	2 to 11 Pin Non-interchangeable Plugs
PCS-2	2 to 11 Pin Non-interchangeable Connectors

When ordering any of the above planning sheets please include Order Number and quantity wanted. Send order to:

ALDEN PRODUCTS COMPANY
117 North Main Street, Brockton, Massachusetts

... the Universal trend in packaging industrial
Electronics and Advanced Instrumentation.

Tomorrow's Designs Today!

As the techniques of Alden Plug-in Unit Construction become more standardized throughout the world — those already designing to these standards will be far in advance of competition because:

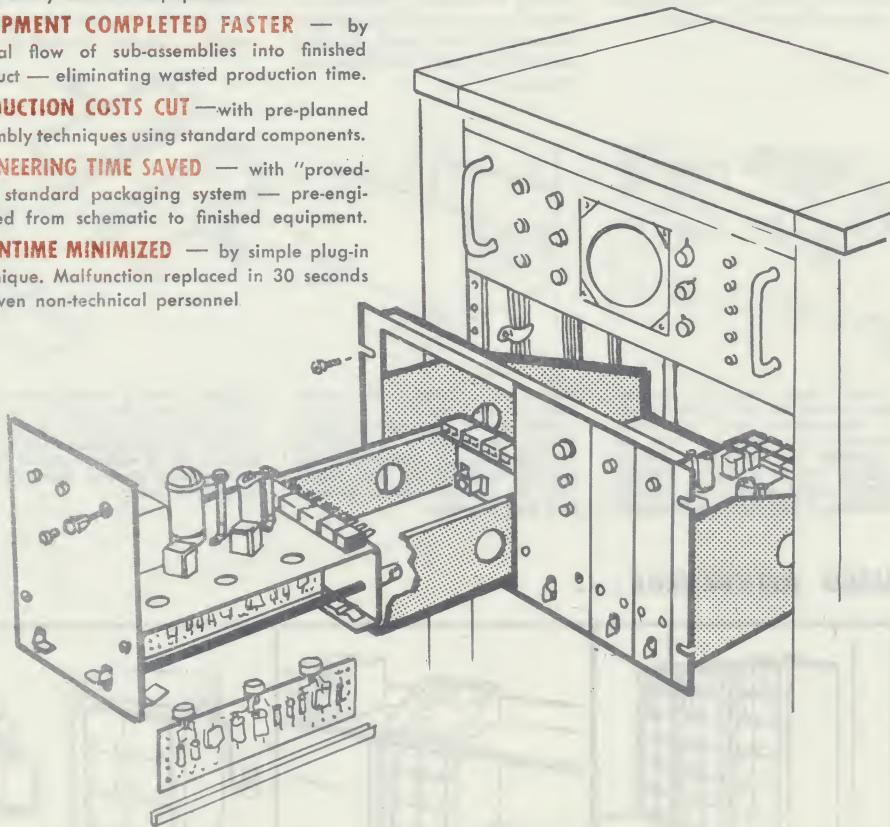
EQUIPMENT IS MORE FUNCTIONAL — ready to move in quickly, set up anywhere to assure user of immediate operation, more reliable, more easily serviced equipment.

EQUIPMENT COMPLETED FASTER — by logical flow of sub-assemblies into finished product — eliminating wasted production time.

PRODUCTION COSTS CUT — with pre-planned assembly techniques using standard components.

ENGINEERING TIME SAVED — with "proved-out" standard packaging system — pre-engineered from schematic to finished equipment.

DOWNTIME MINIMIZED — by simple plug-in technique. Malfunction replaced in 30 seconds by even non-technical personnel

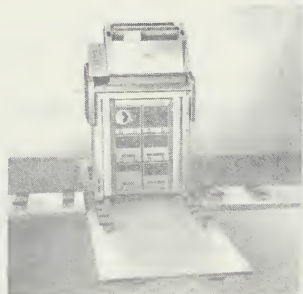


Because the system is completely modular, the basic components can be kept in stock — ready to be quickly made up for any application.

Plug-in Unit Construction features "sell" prospective customers on finished equipment. Built-in reliability and fool-proof servicing convince prospects who otherwise put "thumbs down" on complicated electrical or electronic control equipment.

PLUG-IN UNIT CONSTRUCTION

Equipment can be moved-in quickly and set up anywhere for immediate operation!



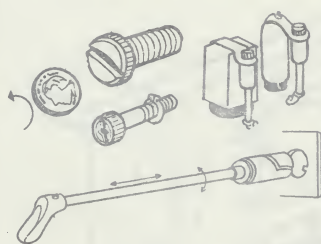
SHIPPED INTACT—all components mounted securely in place.



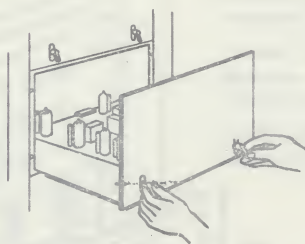
MOBILE OR EASILY PORTABLE — modular construction permits separation into easily handled sections for quick installation or removal.



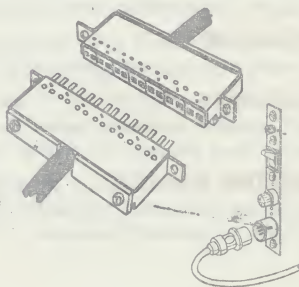
IMMEDIATE OPERATION — equipment can be designed for quick, readily accessible connections.



Unique Alden fastening devices have utmost flexibility—hold plug-in components and assemblies securely in place yet can be locked-on or released without special tools. Exclusive designs permit rapid installation without precision alignment requirements.

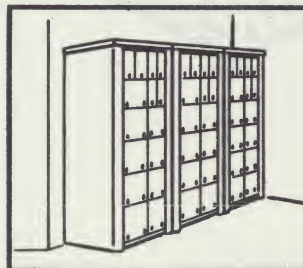


Equipment is constructed in building block modules which are easily broken down into self-contained plug-in sections for portability. Complete circuit assemblies disconnect mechanically and electrically by a simple turn of Serve-a-Unit lock handles.

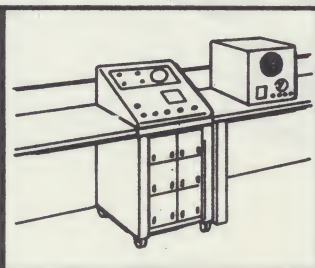


Logical, orderly arrangement of circuitry and plug-in units makes it possible to bring all inputs/outputs to easily accessible point — permits use of easily installed connect-control-monitor elements in convenient area.

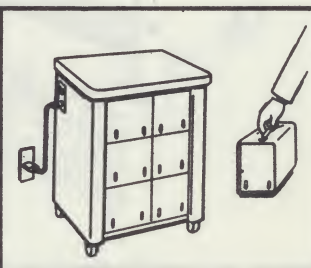
USED ANYWHERE . . .



AGAINST BULKHEADS — Unique design permits operation and servicing entirely from front.



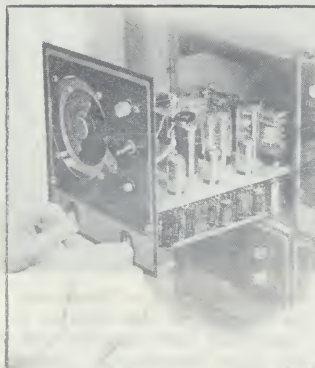
UNDER BENCHES — Modular sizes permit including as "under the counter" control unit — convenient, yet out of way in automatic production lines.



MOBILE UNITS AND PORTABLE INSTRUMENTS — Rugged construction, easy accessibility and modular design permits subdivision into various size units.

ALDEN BASIC CHASSIS . . .

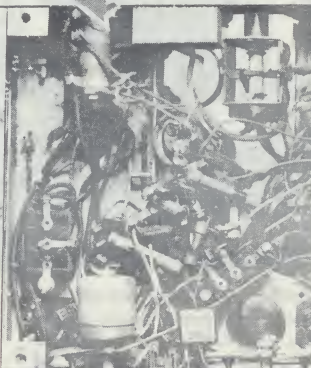
. . . the key to plug-in unit construction



A twist of the fingers and cam-operated Serve-A-Unit Lock guides in, locks or ejects chassis in practically any application.

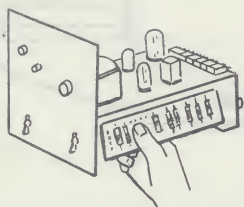


Modular terminal card sub-chassis mount in vertical planes in basic chassis, making a neat and accessible assembly . . . a servicing dream!

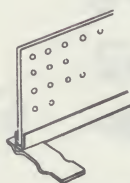


Conventional box chassis and point-to-point wiring — an inaccessible rat's nest assembly — a servicing nightmare!

FEATURES OF THE ALDEN OPEN-SIDED CHASSIS . . .



Open-sided design permits fast accessibility — fast replacement of card-mounted sub-chassis . . . permits more efficient air circulation.



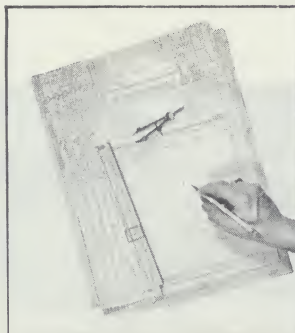
Terminal cards with top-mounted sockets can be mounted by tracks which snap into clips mounted on chassis feet — sockets positioned in respective chassis holes hold cards securely.

Cards can also be mounted by eyeletting to sockets which in turn fasten to chassis as turrets.



Where chassis mounting sockets are not used, brackets with matching holes are used to mount cards to chassis.

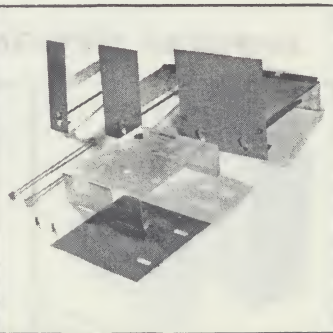
EASY LAYOUT — FAST SERVICE . . .



Indicate various hole centers and sizes on Alden full-scale chassis planning sheets. Mail to Alden Products Company.



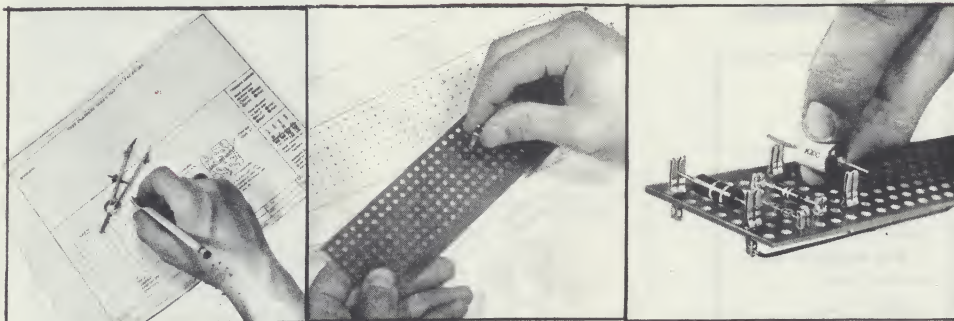
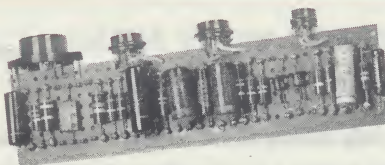
Alden Basic Chassis and Front Panels are stored in the flat — pre-shaped, ready for punching to your specifications.



Punched and shaped chassis are shipped within 24 hours, ready for your circuitry and components.

ALDEN TERMINAL CARD MOUNTING SYSTEM

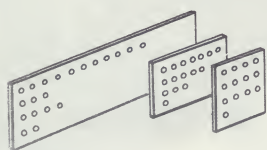
... rapid, efficient build-up
from schematic
to circuitry!



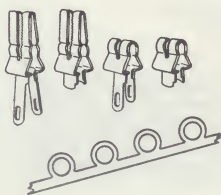
Lay out your circuitry on Alden full-scale terminal card planning sheets.

Snap-in terminals at designated points... for permanent mounting, simply swage in.

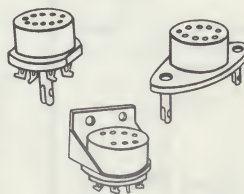
Snap component leads into ratchet jaws of terminals... they're held securely — ready for fast soldering, if necessary.



Pre-punched phenolic terminal boards are available off-the-shelf in various sizes for practically any circuit combinations.

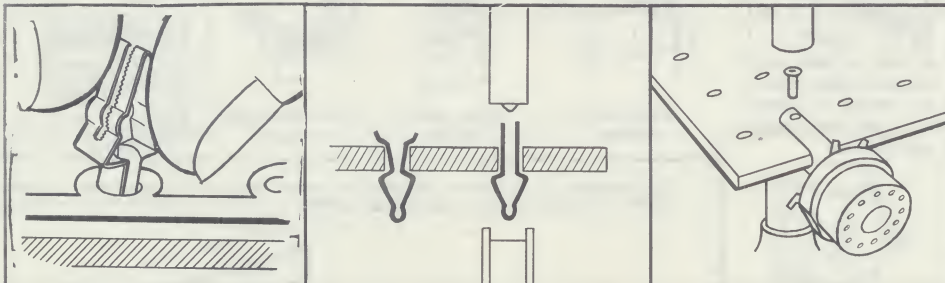


Unique Alden Ratchet Terminals hold component leads securely — no twisting around a post — jumper strip eliminates unnecessary wiring of common circuits.



Alden card-mounting tube sockets integrate tubes and circuitry into single, compact planes... mount simply and securely by eyelet.

Simple, Reliable Circuit Techniques...



Use jumper strip in place of bulky insulated leads... tabs match pre-punched holes in card. Simply stake-in under terminals.

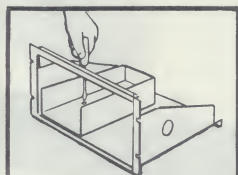
Swage terminals in securely using simple punch and anvil. Use hand tool or automatic machines for prototype or production runs.

Eyelet brackets and sockets in pre-punched holes using standard eyeletting techniques for prototype or production runs.

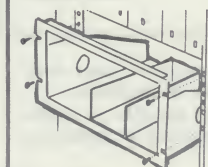
THE IDEAL WAY TO PACKAGE "BUILDING-BLOCK" SUB-ASSEMBLIES.

By fully utilizing all the features of Plug-in Unit Construction the Uni-Rack becomes a more functional, convenient and serviceable unit than conventional assemblies.

Alden
Uni-Racks



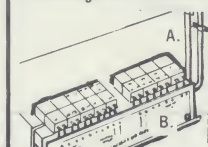
Chassis cases mount easily in Rack Adapter to accommodate chassis.



Completed Rack Adapter mounts in standard rack by 4 screws.



Modular chassis plug into rack mounted adapter as "building block" functions.



All leads and cables easily accessible. Ample room in side channel for cabling. All in/out leads graphically identified.



Finished equipment can be mobile — ready to roll in, plug in for immediate operation.

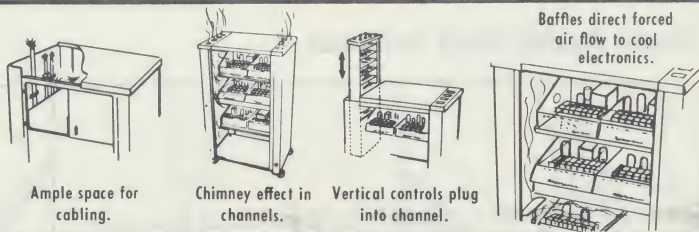
Rack Adapter

Alden
Basic Chassis

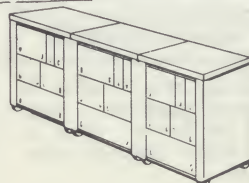
Alden Basic Chassis mount in any combination to become true "building blocks" in the "picture frame" rack adapter. This functionally sub-divided rack module can be included in line with other rack mounted units making up electronic systems.

New picture frame design keeps front panels neatly aligned — provides a more rigid support.

The Alden Rack Adapter mounts in any standard relay rack or specifically in **Alden Uni-Racks** for greater flexibility and servicing ease.

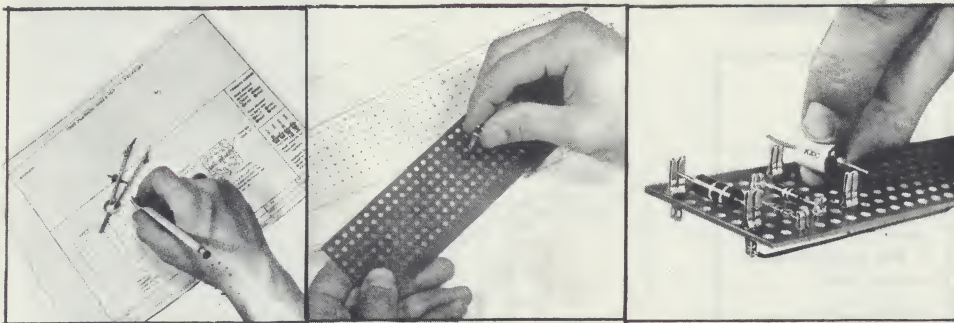
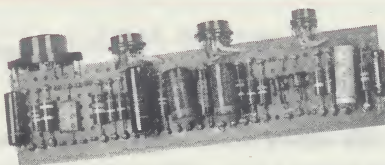


The Uni-Rack is modular — available in various heights and multiples of basic width in either mobile or stationary models — easily accessible front or rear.



ALDEN TERMINAL CARD MOUNTING SYSTEM

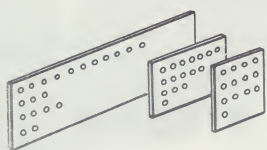
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to circuitry!



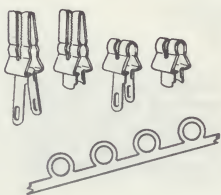
Lay out your circuitry on Alden full-scale terminal card planning sheets.

Snap-in terminals at designated points... for permanent mounting, simply swage in.

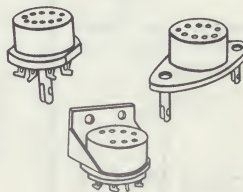
Snap component leads into ratchet jaws of terminals... they're held securely — ready for fast soldering, if necessary.



Pre-punched phenolic terminal boards are available off-the-shelf in various sizes for practically any circuit combinations.

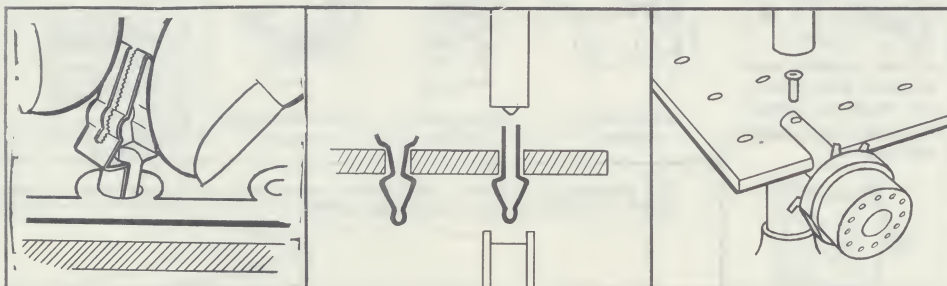


Unique Alden Ratchet Terminals hold component leads securely — no twisting around a post — jumper strip eliminates unnecessary wiring of common circuits.



Alden card-mounting tube sockets integrate tubes and circuitry into single, compact planes... mount simply and securely by eyelet.

Simple, Reliable Circuit Techniques . . .



Use jumper strip in place of bulky insulated leads... tabs match pre-punched holes in card. Simply stake-in under terminals.

Swage terminals in securely using simple punch and anvil. Use hand tool or automatic machines for prototype or production runs.

Eyelet brackets and sockets in pre-punched holes using standard eyeletting techniques for prototype or production runs.

ALDEN INTERCHASSIS CONNECTING SYSTEM

YOU CAN **AVOID** THE HIGH COST OF LACED CABLES
with this new, simplified wiring system

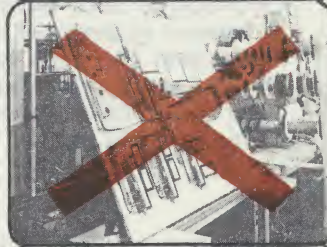
YOU CAN **AVOID** production delays and rejected cables because one lead is damaged or malfunctioning after the cable is laced.



YOU CAN **ELIMINATE** the expense of skilled workers required to dress and lace and strip leads.



YOU CAN **REDUCE** the space and complicated setups required by harness boards.



YOU CAN **SOLVE** the high cost of servicing equipment in the field? Can the user of your equipment afford the downtime.



IF YOU HAVE THESE PROBLEMS
AND WANT TO SOLVE THEM QUICKLY . . .

Join the modern trend to simplicity with the
Alden Interchassis Connecting System.



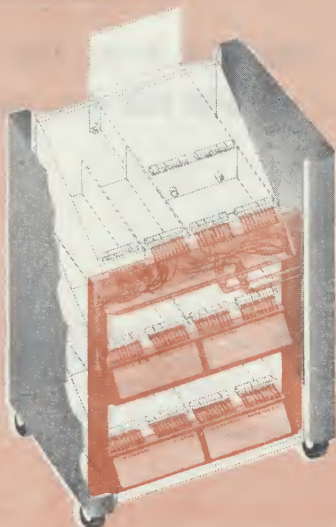
ALDEN PRODUCTS COMPANY

**1G
PI**

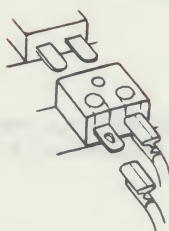
Unitized, metal channels neatly enclose all wiring and provide shielding and protection from many contaminants. Pre-cut leads with contacts on each end are automatically organized in channel slots for fast, simple connections to Back Connectors by unskilled workers.

These color-coded leads with push-fit contacts for solderless connections can be stocked in standard, non-critical lengths for quick connections or disconnections between any two Back Connector tabs.

For permanent setups and maximum reliability leads can be encapsulated in channels and contacts can be easily soldered to Back Connector tabs.



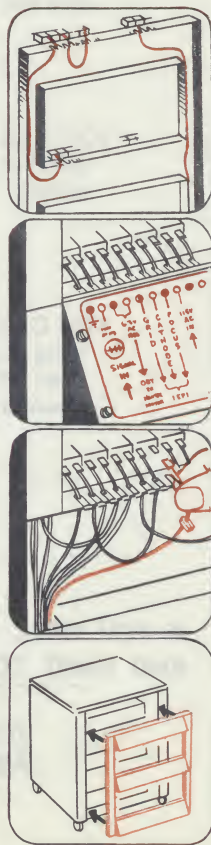
IN SERVICING—Point-of-Check at back plates can present all **pertinent circuit function and test data** in numbers, symbols and color coding for use **anywhere in the world**.



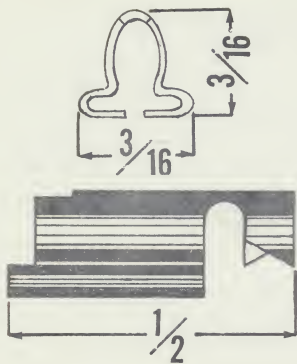
Because each input/output lead is made clear pictorially it becomes easy for **personnel with minimum training** to trace, test and repair malfunctions.

Removable channel covers provide **easy access to wiring**; push-on contacts provide unique **flexibility for replacement or repair**.

Completely assembled interchassis connecting systems can be **shipped intact** ready for **fast, simple installation** in the field even by non-technical personnel.



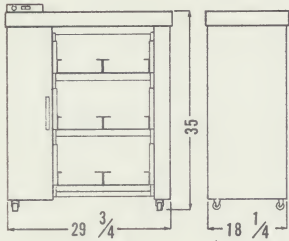
462MINT PUSH-ON TERMINALS FOR MINIATURE BACK CONNECTORS



Wiring cable assemblies are easily fabricated as separate units and pushed onto Miniature Back Connector contacts. The ability to make or break one connection at a time makes this terminal unique and saves service time when changes are necessary. Interchassis wiring can now be made more reliable and servicable through the use of Alden Push-on Terminals.

Contact material is tinned brass and will accommodate wires up to $3/32$ " diameter.

11,030CA ALDEN CONSOLE



The new Alden Console is a mobile unit providing three levels for multiples of chassis as desired. A sturdy pull-out shelf provides space for servicing and the storage compartment at the side holds spare parts or tools. A shelf is standard in the storage area. The sturdy construction is of $1/16$ cold rolled steel, finished in Alden precision gray baked enamel. Shipped assembled ready for use.

For the greatest convenience order 11,030-CHA, which provides the standard console plus the "New Alden Inter-Chassis Connecting System." The Alden unitized wiring channels neatly enclose all connecting leads and provide shielding. The push-on terminals which mate with Alden back connectors eliminate the need for tedious time-consuming soldering. Cable lacing is no longer required.

ALDEN PRODUCTS COMPANY $\frac{IH-I}{PI}$

ALDEN 2", 4" & 8" BASIC CHASSIS

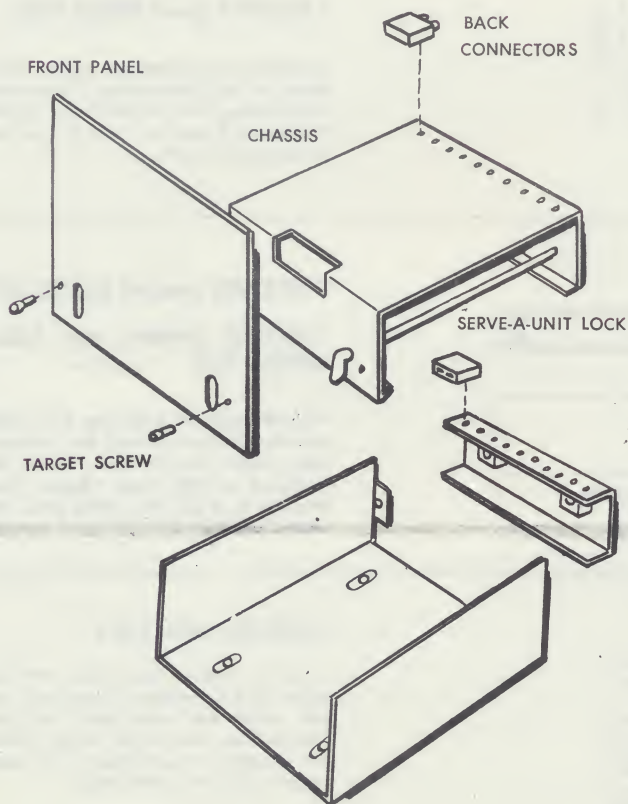
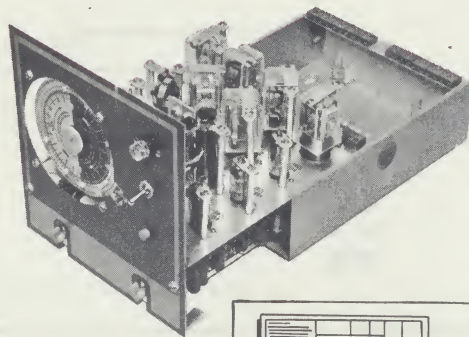
Key your equipment design to the Alden Basic Chassis and open the door to the only complete system of building block packaging components.

IN PROTOTYPE . . . the Alden Basic Chassis system organizes your circuitry by functions into plug-in "building blocks" — automatically forces separation of circuits into logical sub-assemblies.

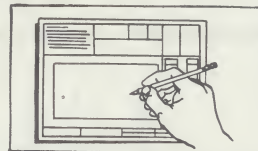
IN MANUFACTURING . . . sub-assembly techniques are ideally suited to high velocity assembly methods — eliminating production bottlenecks.

IN OPERATION . . . electronic functions have instant accessibility and fast, simple replacement, with quick, positive cam lock and open-sided construction.

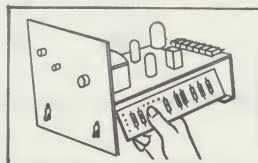
Design and package your equipment using this faster, easier method — it's as simple as this . . .



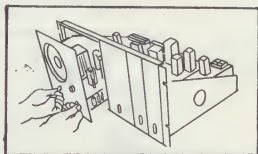
The component parts of the Alden 2", 4", 8" BASIC CHASSIS assembly (illustrated here by the 8" chassis) assemble in the same manner and are described on the following pages.



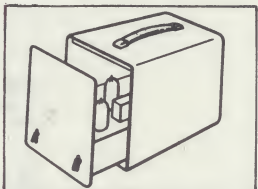
For punched chassis and front panels to your specs indicate hole sizes and centers on full-sized chassis and front panel planning sheets. (We provide them.)



Snap in terminal card circuitry in vertical planes and mount components on chassis and front panel.

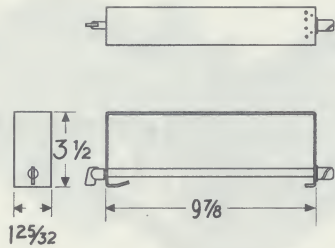


Completed chassis is then plugged into Rack Adapter and included in Alden Uni-Rack or standard relay rack.



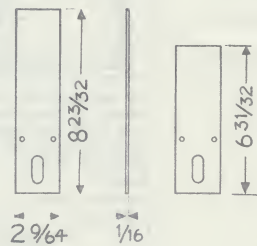
Chassis plug securely into instrument cases as portable equipment or for shipment as replacement unit.

11002-1 BASIC CHASSIS (2" Width)



Assembly includes one cam operating Serve-A-Unit Lock which locks in or ejects from back plate. Holes are punched for the two miniature Alden Back Connectors (4 contacts). Basic Chassis is open-sided construction, cadmium plated, $\frac{1}{16}$ " cold rolled steel. Weld nuts are provided for fastening front panel.

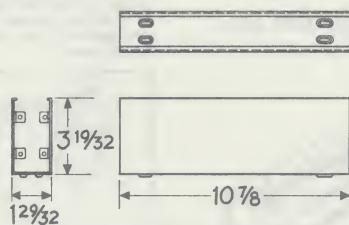
11002-1A is the same chassis, with the Alden Basic Connectors eyeleted in place.



11002-PF7-4A FRONT PANEL

11002-PF8-3/4-4A FRONT PANEL

Available in two standard heights which fasten to the Alden Basic Chassis with two stainless steel Alden Target Screws (included). Clearance hole is punched for cam lock handle.



11002-5VA (vented) CHASSIS CASE

11002-5A (without vent holes) CHASSIS CASE

Provides slide-in enclosure for Alden Chassis. Brackets on end for fastening back plate; four holes in bottom for fastening to Alden Rack Adapter. Construction is of $\frac{1}{32}$ " cold rolled steel. Finished in baked precision gray enamel.



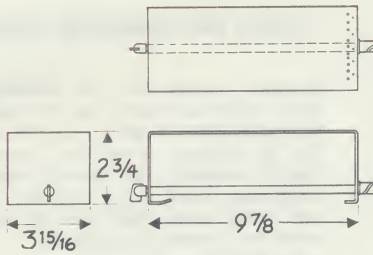
11002-3A BACK PLATE

Assembly includes Back Plate with two Alden Back Connectors (4 contacts), one cam socket for Serve-A-Unit Lock and four stainless steel Alden Target Screws for mounting. Construction is $\frac{1}{16}$ " cadmium plated cold rolled steel.

11002-3 BACK PLATE

Same as 11002-3A, but without Alden Back Connectors.

11004-1 BASIC CHASSIS (4" Width)

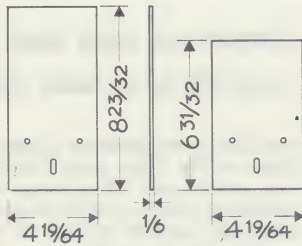


Assembly includes one cam operating Serve-A-Unit Lock which locks in or ejects from back plate. Holes are punched for the five Alden Miniature Back Connectors (10 contacts). Basic Chassis is open-sided construction, cadmium plated, $\frac{1}{16}$ " cold rolled steel. Weld nuts are provided for fastening front panel.

11004-1 A is the same chassis with the 5 male Alden Back Connectors eyeleted in place.

11004-PF7-4A FRONT PANEL

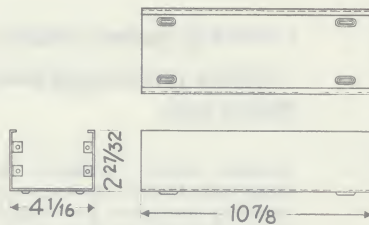
11004-PF8-3/4-4A FRONT PANEL



Available in two standard heights which fasten to the Alden Basic Chassis with two stainless steel Alden Target Screws (included). Clearance hole punched for cam lock handle constructed of $\frac{1}{16}$ " cold rolled steel finished in baked precision gray enamel.

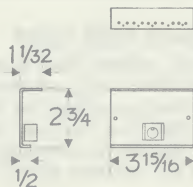
11004-5VA (vented) CHASSIS CASE

11004-5A (without vent holes) CHASSIS CASE



Provides slide-in enclosure for the Alden Basic Chassis. Brackets on end for fastening Back Plate; four holes in bottom for fastening to Alden Rack Adapter. Construction is of $\frac{1}{32}$ " cold rolled steel finished in baked precision gray enamel.

11004-3A BACK PLATE

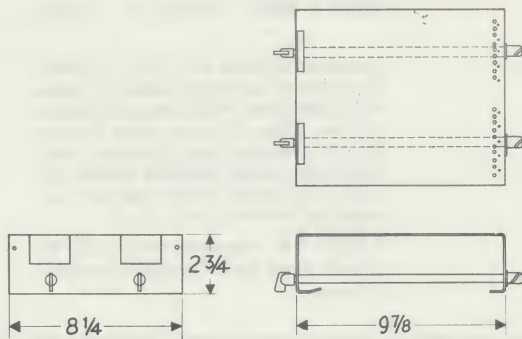


Assembly includes Back Plate with five female Alden Back Connectors (10 contacts), one cam socket for a Serve-A-Unit Lock and two stainless steel Alden Target Screws for mounting. Construction is $\frac{1}{16}$ " cadmium plated cold rolled steel.

11004-3

Same as 11004-3A, but without Alden Back Connectors.

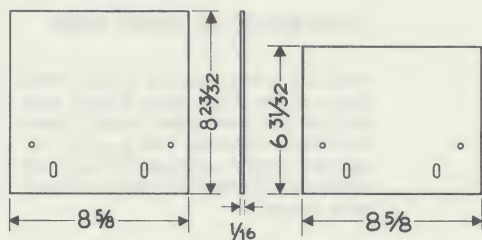
ALDEN 8" BASIC CHASSIS



11008-1 BASIC CHASSIS (8" Width)

Assembly includes two cam operating Serve-A-Unit Locks which lock in or eject from back plate. Holes are punched for the ten miniature Alden Back Connectors (20 contacts). Basic Chassis is open-sided construction, cadmium plated, $\frac{1}{16}$ " cold rolled steel. Weld nuts are provided for fastening front panel.

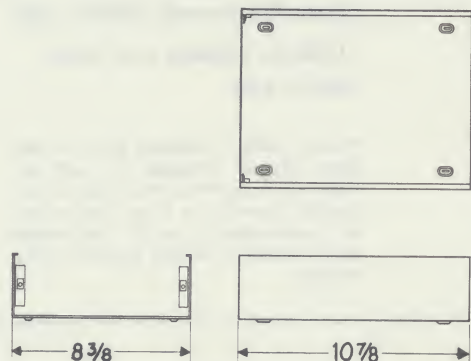
11008-1A is the same chassis with the male Alden Back Connectors eyeleted in place.



11008-PF7-4A FRONT PANEL

11008-PF8-3/4-4A FRONT PANEL

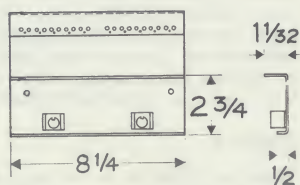
Available in two standard heights which fasten to the Alden Basic Chassis with two stainless steel Alden Target Screws (included). Clearance holes punched for cam lock handles. Finished in baked precision gray enamel.



11008-5VA (vented) CHASSIS CASE

11008-5A (without vent holes) CHASSIS CASE

Provides slide-in enclosure for the Alden Basic Chassis. Brackets on end for fastening back plate; four holes in bottom for fastening to Alden Rack Adapter. Construction is of $\frac{1}{32}$ " cold rolled steel finished in baked precision gray enamel.



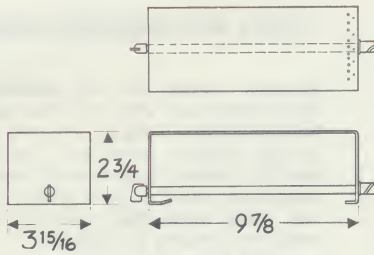
11008-3A BACK PLATE

Assembly includes Back Plate with ten female Alden Back Connectors (20 contacts), two cam sockets for Serve-A-Unit Locks, and two stainless steel Alden Target Screws for mounting. Construction is $\frac{1}{16}$ " cadmium plated cold rolled steel.

11008-3 BACK PLATE

Same as 11008-3A, but without Alden Back Connectors.

11004-1 BASIC CHASSIS (4" Width)

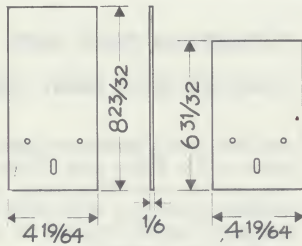


Assembly includes one cam operating Serve-A-Unit Lock which locks in or ejects from back plate. Holes are punched for the five Alden Miniature Back Connectors (10 contacts). Basic Chassis is open-sided construction, cadmium plated, $\frac{1}{16}$ " cold rolled steel. Weld nuts are provided for fastening front panel.

11004-1 A is the same chassis with the 5 male Alden Back Connectors eyeleted in place.

11004-PF7-4A FRONT PANEL

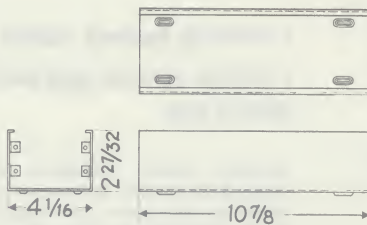
11004-PF8-3/4-4A FRONT PANEL



Available in two standard heights which fasten to the Alden Basic Chassis with two stainless steel Alden Target Screws (included). Clearance hole punched for cam lock handle constructed of $\frac{1}{16}$ " cold rolled steel finished in baked precision gray enamel.

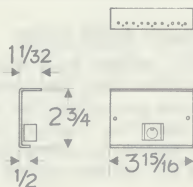
11004-5VA (vented) CHASSIS CASE

11004-5A (without vent holes) CHASSIS CASE



Provides slide-in enclosure for the Alden Basic Chassis. Brackets on end for fastening Back Plate; four holes in bottom for fastening to Alden Rack Adapter. Construction is of $\frac{1}{32}$ " cold rolled steel finished in baked precision gray enamel.

11004-3A BACK PLATE

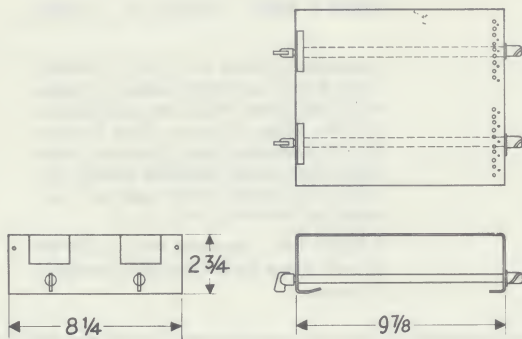


Assembly includes Back Plate with five female Alden Back Connectors (10 contacts), one cam socket for a Serve-A-Unit Lock and two stainless steel Alden Target Screws for mounting. Construction is $\frac{1}{16}$ " cadmium plated cold rolled steel.

11004-3

Same as 11004-3A, but without Alden Back Connectors.

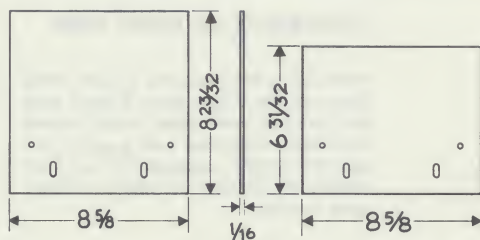
ALDEN 8" BASIC CHASSIS



11008-1 BASIC CHASSIS (8" Width)

Assembly includes two cam operating Serve-A-Unit Locks which lock in or eject from back plate. Holes are punched for the ten miniature Alden Back Connectors (20 contacts). Basic Chassis is open-sided construction, cadmium plated, $\frac{1}{16}$ " cold rolled steel. Weld nuts are provided for fastening front panel.

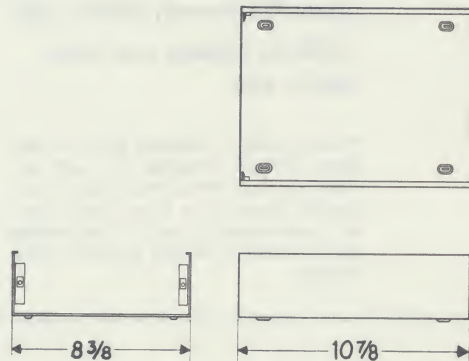
11008-1A is the same chassis with the male Alden Back Connectors eyeleted in place.



11008-PF7-4A FRONT PANEL

11008-PF8-3/4-4A FRONT PANEL

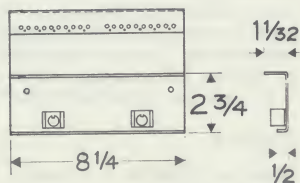
Available in two standard heights which fasten to the Alden Basic Chassis with two stainless steel Alden Target Screws (included). Clearance holes punched for cam lock handles. Finished in baked precision gray enamel.



11008-5VA (vented) CHASSIS CASE

11008-5A (without vent holes) CHASSIS CASE

Provides slide-in enclosure for the Alden Basic Chassis. Brackets on end for fastening back plate; four holes in bottom for fastening to Alden Rack Adapter. Construction is of $\frac{1}{32}$ " cold rolled steel finished in baked precision gray enamel.



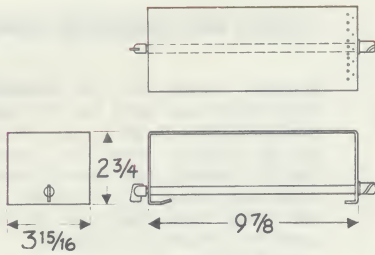
11008-3A BACK PLATE

Assembly includes Back Plate with ten female Alden Back Connectors (20 contacts), two cam sockets for Serve-A-Unit Locks, and two stainless steel Alden Target Screws for mounting. Construction is $\frac{1}{16}$ " cadmium plated cold rolled steel.

11008-3 BACK PLATE

Same as 11008-3A, but without Alden Back Connectors.

11004-1 BASIC CHASSIS (4" Width)

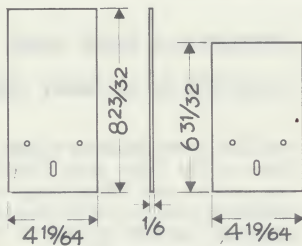


Assembly includes one cam operating Serve-A-Unit Lock which locks in or ejects from back plate. Holes are punched for the five Alden Miniature Back Connectors (10 contacts). Basic Chassis is open-sided construction, cadmium plated, $\frac{1}{16}$ " cold rolled steel. Weld nuts are provided for fastening front panel.

11004-1 A is the same chassis with the 5 male Alden Back Connectors eyeleted in place.

11004-PF7-4A FRONT PANEL

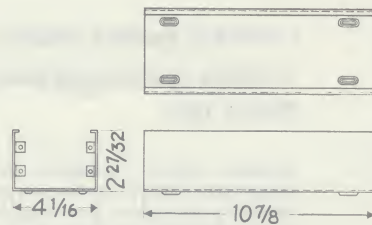
11004-PF8-3/4-4A FRONT PANEL



Available in two standard heights which fasten to the Alden Basic Chassis with two stainless steel Alden Target Screws (included). Clearance hole punched for cam lock handle constructed of $\frac{1}{16}$ " cold rolled steel finished in baked precision gray enamel.

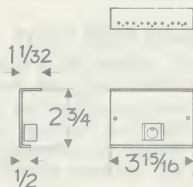
11004-5VA (vented) CHASSIS CASE

11004-5A (without vent holes) CHASSIS CASE



Provides slide-in enclosure for the Alden Basic Chassis. Brackets on end for fastening Back Plate; four holes in bottom for fastening to Alden Rack Adapter. Construction is of $\frac{1}{32}$ " cold rolled steel finished in baked precision gray enamel.

11004-3A BACK PLATE

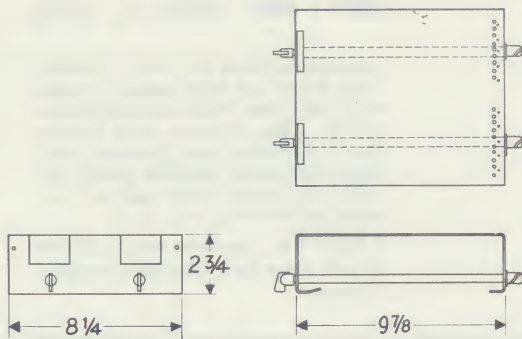


Assembly includes Back Plate with five female Alden Back Connectors (10 contacts), one cam socket for a Serve-A-Unit Lock and two stainless steel Alden Target Screws for mounting. Construction is $\frac{1}{16}$ " cadmium plated cold rolled steel.

11004-3

Same as 11004-3A, but without Alden Back Connectors.

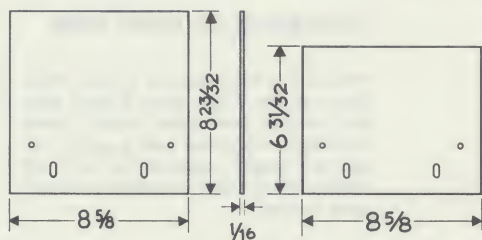
ALDEN 8" BASIC CHASSIS



11008-1 BASIC CHASSIS (8" Width)

Assembly includes two cam operating Serve-A-Unit Locks which lock in or eject from back plate. Holes are punched for the ten miniature Alden Back Connectors (20 contacts). Basic Chassis is open-sided construction, cadmium plated, $\frac{1}{16}$ " cold rolled steel. Weld nuts are provided for fastening front panel.

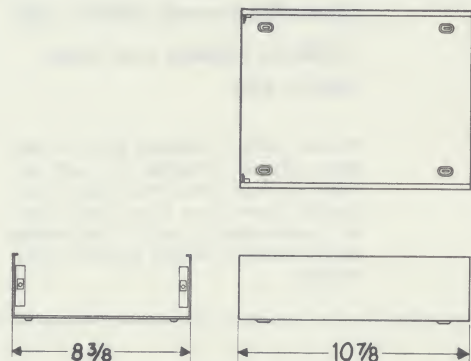
11008-1A is the same chassis with the male Alden Back Connectors eyeleted in place.



11008-PF7-4A FRONT PANEL

11008-PF8-3/4-4A FRONT PANEL

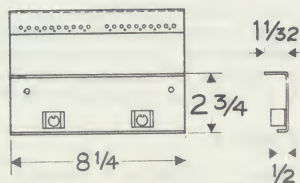
Available in two standard heights which fasten to the Alden Basic Chassis with two stainless steel Alden Target Screws (included). Clearance holes punched for cam lock handles. Finished in baked precision gray enamel.



11008-5VA (vented) CHASSIS CASE

11008-5A (without vent holes) CHASSIS CASE

Provides slide-in enclosure for the Alden Basic Chassis. Brackets on end for fastening back plate; four holes in bottom for fastening to Alden Rack Adapter. Construction is of $\frac{1}{32}$ " cold rolled steel finished in baked precision gray enamel.



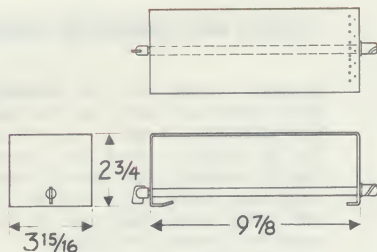
11008-3A BACK PLATE

Assembly includes Back Plate with ten female Alden Back Connectors (20 contacts), two cam sockets for Serve-A-Unit Locks, and two stainless steel Alden Target Screws for mounting. Construction is $\frac{1}{16}$ " cadmium plated cold rolled steel.

11008-3 BACK PLATE

Same as 11008-3A, but without Alden Back Connectors.

11004-1 BASIC CHASSIS (4" Width)

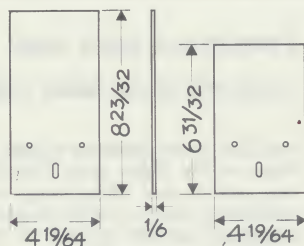


Assembly includes one cam operating Serve-A-Unit Lock which locks in or ejects from back plate. Holes are punched for the five Alden Miniature Back Connectors (10 contacts). Basic Chassis is open-sided construction, cadmium plated, $\frac{1}{16}$ " cold rolled steel. Weld nuts are provided for fastening front panel.

11004-1 A is the same chassis with the 5 male Alden Back Connectors eyeleted in place.

11004-PF7-4A FRONT PANEL

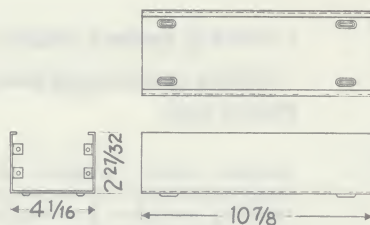
11004-PF8-3/4-4A FRONT PANEL



Available in two standard heights which fasten to the Alden Basic Chassis with two stainless steel Alden Target Screws (included). Clearance hole punched for cam lock handle constructed of $\frac{1}{16}$ " cold rolled steel finished in baked precision gray enamel.

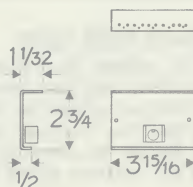
11004-5VA (vented) CHASSIS CASE

11004-5A (without vent holes) CHASSIS CASE



Provides slide-in enclosure for the Alden Basic Chassis. Brackets on end for fastening Back Plate; four holes in bottom for fastening to Alden Rack Adapter. Construction is of $\frac{1}{32}$ " cold rolled steel finished in baked precision gray enamel.

11004-3A BACK PLATE



Assembly includes Back Plate with five female Alden Back Connectors (10 contacts), one cam socket for a Serve-A-Unit Lock and two stainless steel Alden Target Screws for mounting. Construction is $\frac{1}{16}$ " cadmium plated cold rolled steel.

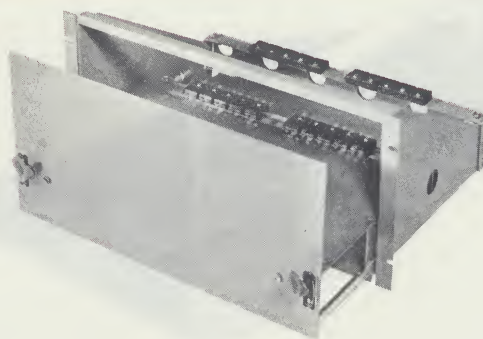
11004-3

Same as 11004-3A, but without Alden Back Connectors.

ALDEN 17" BASIC CHASSIS

SPECIFICATIONS

Alden's 17" Basic Chassis unit is made for heavy duty electronic packaging with lighter chassis units in the same equipment. Chassis is open-sided, plug-in construction with accessibility from back or front. Ideally suited for housing heavy duty transformers or power units without special packaging.



ALDEN 17" BASIC CHASSIS

SPECIFICATIONS

Basic Chassis

The Alden 17" Basic Chassis is ideal for heavy duty electronic components that require a solid mounting chassis. This 17" Basic Chassis plugs into the Alden 19" Chassis Rack Adapter. Rack has a heavy duty lock frame with ten large female back connectors (20 contacts). Chassis front panel is available in 7", 8 $\frac{3}{4}$ " or 10 $\frac{1}{2}$ " height. Two heavy duty Serve-A-Unit Locks lock or eject the chassis with one half turn.

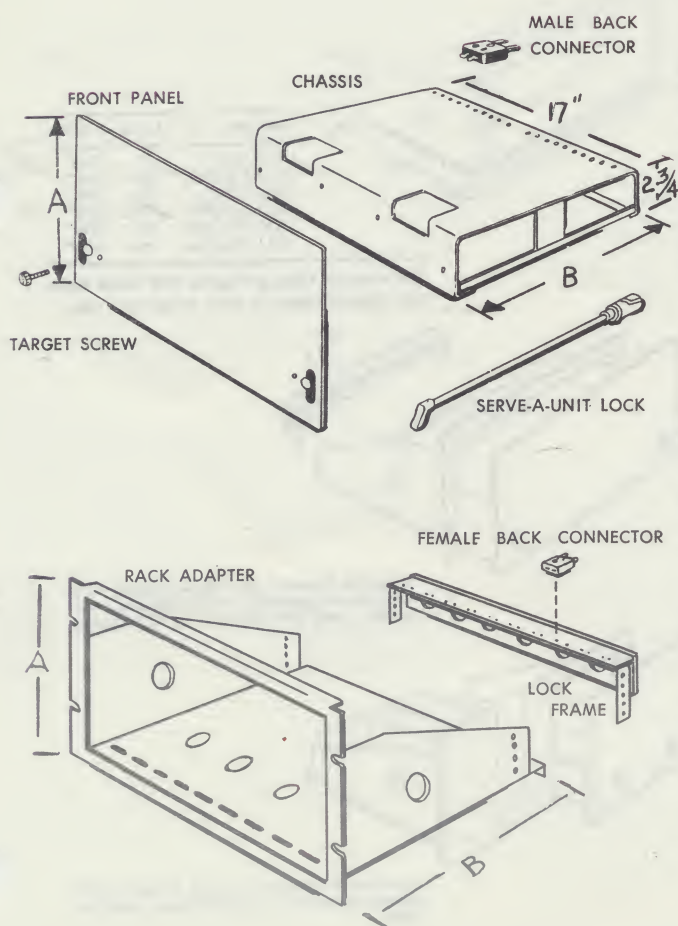
Part No.	A Dim.	B Dim.
11117-8-3/4L-1A	8 $\frac{3}{4}$ "	13"
11117-8-3/4S-1A	8 $\frac{3}{4}$ "	10 $\frac{1}{2}$ "
11117-7L-1A	7"	13"
11117-7S-1A	7"	10 $\frac{1}{2}$ "
11117-10-1/2S-1A	10 $\frac{1}{2}$ "	10 $\frac{1}{2}$ "
11117-10-1/2L-1A	10 $\frac{1}{2}$ "	13"

RACK ADAPTER WITH LOCK FRAME

Basic chassis plugs into the standard picture-frame rack adapter which has a lock frame with ten large female back connectors (20 contacts). This rack adapter which is adapted for the heavy duty chassis comes in standard heights to fit 7", 8 $\frac{3}{4}$ " or 10 $\frac{1}{2}$ " front panels snugly.

Chassis front panels and rack adapters are finished in baked precision grey enamel.

Part No.	A Dim.	B Dim.
11117-7SRA-LFA	7"	12 $\frac{1}{4}$ "
11117-7LRA-LFA	7"	14 $\frac{3}{4}$ "
11117-8-3/4LRA-LFA	8 $\frac{3}{4}$ "	14 $\frac{3}{4}$ "
11117-8-3/4SRA-LFA	8 $\frac{3}{4}$ "	12 $\frac{1}{4}$ "
11117-10-1/2SRA-LFA	10 $\frac{1}{2}$ "	12 $\frac{1}{4}$ "
11117-10-1/2LRA-LFA	10 $\frac{1}{2}$ "	14 $\frac{3}{4}$ "



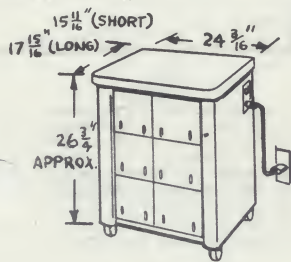
ALDEN UNI-RACKS

See pages, over



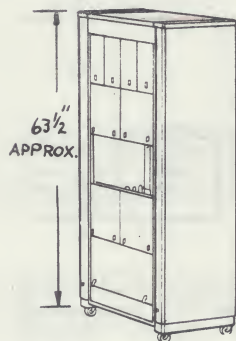
The Alden Uni-Rack provides the ideal way to package your "Building Block" sub-assemblies.

By fully utilizing all the features of plug-in unit construction, Uni-Racks are more compact, convenient and serviceable unit than conventional assemblies. The Alden Uni-Rack, is available in two basic heights — in either mobile or stationary models — easily accessible from either front or rear. Hollow side channels provide ample room for cabling and have a natural chimney effect for rapid heat dissipation. Adjustable height adjusts overall height of Uni-Rack.



ALDEN LOW MODEL UNI-RACK

The low model Uni-Rack is ideal for on-the-spot mobile controls, may be stationary under benches; for test setups in labs or on production lines to house process controls. Low model holds three rack adapters to mount multiples of chassis as desired. Uni-Rack is available singly or in multiples. Shipped knocked down, can be assembled in minutes. Construction is of $\frac{1}{16}$ " cold rolled steel and finished in precision grey enamel.



ALDEN HIGH MODEL UNI-RACK

The high model Uni-Rack offers many of the same conveniences, but makes available more cabinet space. This high model may be used in multiples, mobile or stationary. Accommodates seven rack adapters for housing chassis configurations. Rugged steel construction, precision grey enamel finish. Shipped knocked down, can be assembled in minutes.

NOTE: With three-piece top cover, side channels may be used to house vertical controls — utilizing the same plug-in principle for connecting in/out leads.

WITH ONE-PIECE TOP COVER

Part No.	Panel Height	Inside Depth
11,024 SURL	24 1/2"	13 1/4"
11,024 LURL	24 1/2"	15 1/2"
11,060 SURL	61 1/4"	13 1/4"
11,060 LURL	61 1/4"	15 1/2"

WITH THREE-PIECE COVER

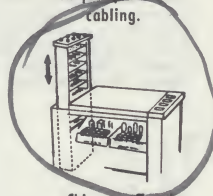
Part No.	Panel Height	Inside Depth
11,024-3T-SURL	24 1/2"	13 1/4"
11,024-3T-LURL	24 1/2"	15 1/2"
11,060-3T-SURL	61 1/4"	13 1/4"
11,060-3T-LURL	61 1/4"	15 1/2"

To order Uni-Rack with casters assembled, add "C" to above part numbers.

ALDEN PRODUCTS COMPANY



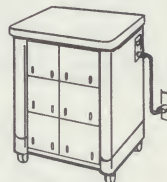
Ample space for cabling.



Chimney effect in channels.



Baffles direct forced air flow to cool electronics.



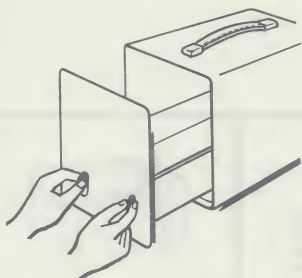
The Uni-Rack is modular — available in various heights

INSTRUMENT CASES

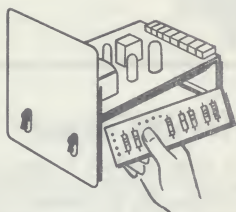


Design your instruments in these pre-engineered, prefabricated cases . . . they will be more reliable, more easily serviced units — saving many hours of engineering and construction time. These new designs make it possible to apply the advantages of plug-in construction to smaller portable electronics gear.

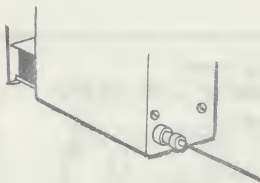
From the exterior, cases follow contemporary trends in advanced styling with functional recessed front panel to protect dials, indicating lights, switches, etc. . . . but from that point on, all resemblance to standard cases ends!



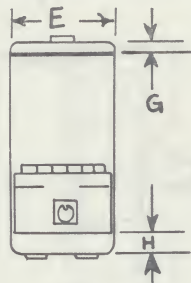
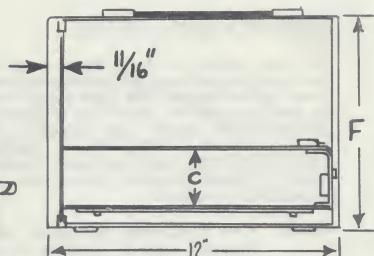
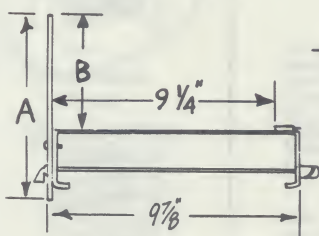
When malfunctions occur in the circuits . . . a simple half turn of the Serve-A-Unit Lock handle disconnects the entire electronic chassis. This slides out to expose the open-sided chassis.



Circuitry is mounted on pre-punched terminal cards which snap in and out of the open-sided chassis.

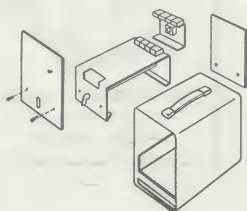


Power inputs can be included in the rear, convenient and out of the way. Both front and rear panels are hooded so that visible instruments are protected.



SPECIFICATIONS

Description	Part No.	Wt.	A	B	C	D	E	F	G	H	No contacts*
2" Inst. Case	11002-8 3/4 CCA	5 lbs.	8 3/4	4 5/8	3 1/2	1 13/16	2 1/4	9"	1/2	4
4" Inst. Case	11004-8 3/4 CCA	9.5 lbs.	8 3/4	5 3/8	2 3/4	4"	4 7/8	10"	1/2	1/2	10
8" Inst. Case	11008-8 3/4 CCA	14.5 lbs.	8 3/4	5 3/8	2 3/4	8 5/8	8 13/16	10"	1/2	1/2	20



*If more contacts are needed, additional back connectors can be stacked.

The Alden "off-the-shelf" instrument cases are made for 2"—4"—8" chassis. Constructed of cold rolled steel .062 and finished in baked grey enamel with rubber feet and a leather handle.

48

hour hole punching and silk screen service

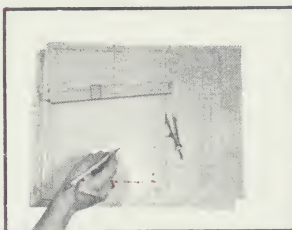
... for Alden Chassis and Front Panels

FAST TURN AROUND DELIVERY

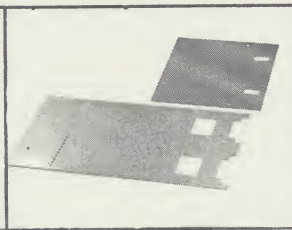
Off the shelf Alden Chassis and Front Panels in 2", 4", 8" and 17" widths await your specifications. To lay out your requirements use full scale Alden planning sheets for Chassis and Front Panels either from your Alden Handbook or in quantities from our Customers' Department.

Lay out your hole sizes and locations and mail the planning sheets to us. This same planning sheet will be the basis for a template to process one or one hundred Chassis.

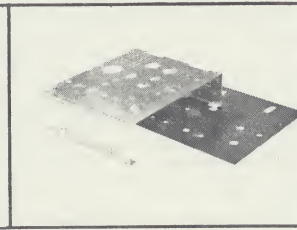
While pre-fabricated chassis are being punched, and silk screened to your specifications — you may be pre-assembling circuitry on terminal boards — ready to snap in when your chassis arrives.



Indicate hole sizes and locations on these full scale planning sheets. These sheets are used as templates for punching to your specifications.



Pre-fabricated chassis and front panels as seen before punching and screening.



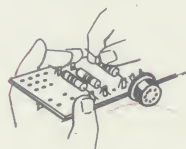
Chassis and front panel punched, shaped, and ready for screening — then shipment.

Many designers who use plug-in unit construction techniques plan their assembly work so that individual modules are in a build up stage before chassis arrives. Modular units easily snap in or bracket mount.

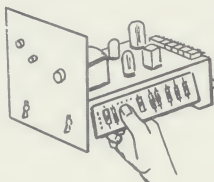
Your finished chassis is shipped punched, painted and screened with any other components mounted as specified.

Front panels, chassis, racks may be silk screened with numbers, symbols, words, etc. Art work and type (unless specified) will require additional charge. There is a basic charge for each screen. Art work must be supplied as black letters, symbols, etc. on a white surface, to scale, and positioned same size.

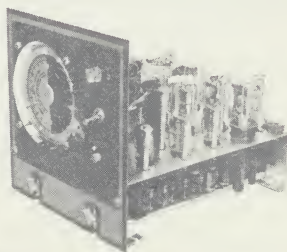
NOTE: Additional Alden components used to mount, house, fasten, monitor and connect circuitry may be ordered at the same time.



Components snap securely into ratchet jawed terminals to make up finished terminal card modules.



Terminal card modules snap in when chassis arrives.

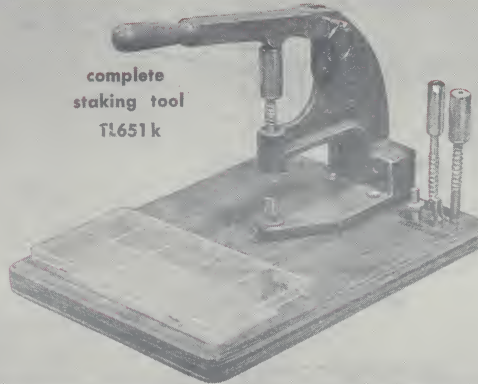


ALDEN PRODUCTS COMPANY No. Main St., Brockton, Mass.

**2K
PI**

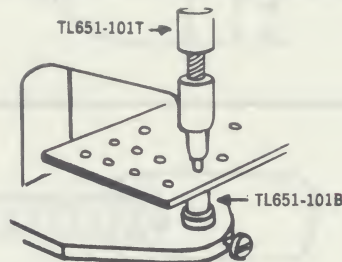
Alden's all-in-one universal staking tool makes it possible for you to quickly build complete resistor board modules. Interchangeable heads and anvils punch holes, eyelet hardware and swage terminals. This universal tool makes breadboarding and prototype work possible with a degree of simplicity using only a small corner of your desk. The Alden Terminal Card Mounting System utilizes this tool in every circuit or resistor board that you build.

complete
staking tool
TL651k



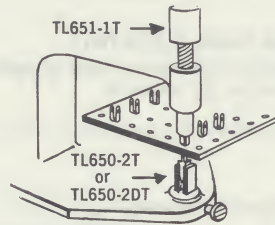
PUNCHING HOLES

Blank phenolic cards or similar material may be punched by inserting the **TL651-101T** hole punch through the bearing. Then insert **TL651-101B** anvil into bottom hole and tighten Alden Target Screw. Standard hole size .101 for Alden terminals.



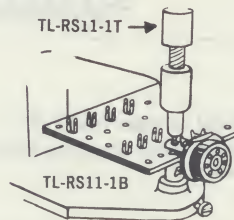
SWAGING TERMINALS

Swaging in Alden ratchet jawed terminals is done by inserting the **TL651-1T** terminal punch and the **TL650-2T** terminal anvil or the **TL650-2DT** diode terminal anvil which has smaller jaws. This simple process secures terminals that will hold all components securely.

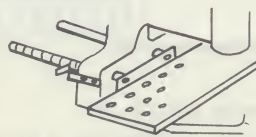


EYELETTING— RIVETING

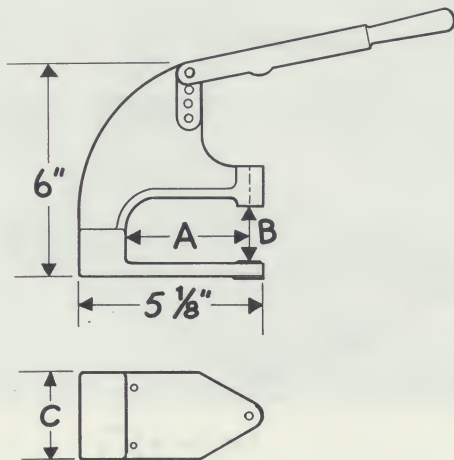
Smaller terminal card hardware may be eyeleted into place by inserting the **TLRS11-1T** eyelet punch and the **TLRS11-1B** anvil. Crimping is done by inserting eyelet through and placing in position for tool head to come down solidly onto eyelet end.



An extra feature of this completely unique tool is an adjustable guide for punching holes in unpunched phenolic cards or similar material. Guide is snapped into position behind the anvil and allows you to evenly punch holes in rows. **#TL651GA.**



SPECIFICATIONS



The basic staking tool is cast in aluminum. The basic casting may be purchased without the mounting board for a specific mounting or adaptation of your choice. Casting has a self-oiling bronze bearing through which the interchangeable tools work after insertion. Interchangeable anvils locate in hole beneath and are firmly set by tightening up on Alden Target Screw.

Dimensions are as follows:

Throat depth $3\frac{1}{2}$ " (dim. A)
Throat height $1\frac{1}{16}$ " (dim. B)
Width $2\frac{3}{8}$ " (dim. C)
Height 6"
There are two $\frac{3}{16}$ " mounting holes in the casting for mounting.



Hole Punch TL651-101T

Punches .101 holes in tough glass-filled phenolic or similar $\frac{1}{16}$ " material.



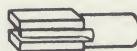
Hole Anvil TL651-101B

Mates with hole punch to make .101 diameter holes.



TL650-2DT

TL650-2T



Terminal Swager TL651-1T

Swages terminals after they have been inserted into holes.

Terminal Anvil TL650-2T

Terminal Anvil (diode) TL650-2DT

Anvil mates with swaging head to hold terminal after it has been placed into the card.



Eyelet Punch TLR511-1T

Crimps eyelet end over after it has been inserted through both terminal card and component.



Eyeleting Anvil TLR511-1B

Holds head of eyelet securely while it is being crimped.

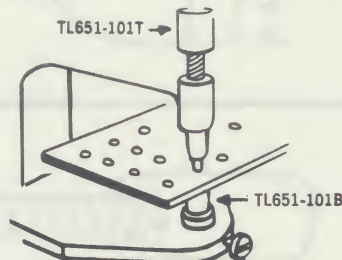
Alden's all-in-one universal staking tool makes it possible for you to quickly build complete resistor board modules. Interchangeable heads and anvils punch holes, eyelet hardware and swage terminals. This universal tool makes breadboarding and prototype work possible with a degree of simplicity using only a small corner of your desk. The Alden Terminal Card Mounting System utilizes this tool in every circuit or resistor board that you build.

complete
staking tool
TL651 k



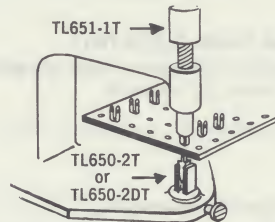
PUNCHING HOLES

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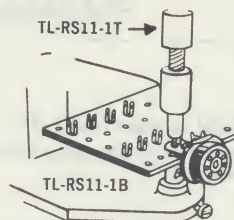
SWAGING TERMINALS

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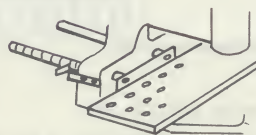


EYELETTING— RIVETING

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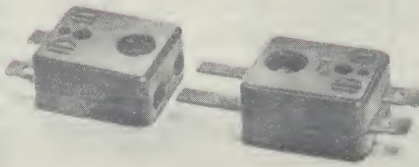
An extra feature of this completely unique tool is an adjustable guide for punching holes in unpunched phenolic cards or similar material. Guide is snapped into position behind the anvil and allows you to evenly punch holes in rows. **#TL651GA.**



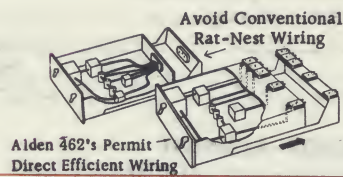
462 SERIES

Here are the back connectors that are mounted as individual units across the back of the chassis to provide the most direct efficient circuitry wiring...and that bring out leads for instant identification and check. They make possible the design of modern plug in, slide in, units that go together and come apart easily.

Generous bell mouthed entries and floating clip action provide wide mating tolerance to do away with critical alignment problems. Color coding permanently identifies each lead for easy check and service.

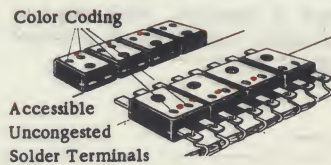


DESIGN FEATURES



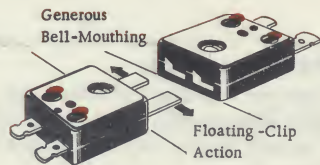
EFFICIENT CIRCUIT WIRING

Connectors can be mounted where desired - to allow for isolation of critical voltages or frequencies - to provide most direct wiring from component to connector - to eliminate rat-nest wiring of conventional methods.



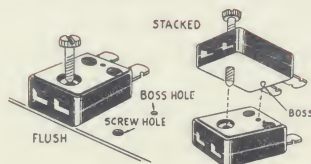
EASY SERVICING and RAPID CIRCUIT CHECKS

Solder terminals easily accessible and uncongested for multiple contact wiring. Color-coding on back connector, corresponding to lead color, identifies each lead for instantaneous check to main circuit or trunk line.



EASY INSERTION AND REMOVAL

Made possible by large bell-mouth entries and ample float of rugged contacts. Wide mating tolerances eliminate critical unit alignment problems.



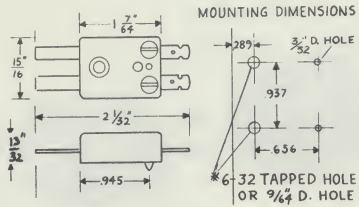
EASY MOUNTING

Single screw for mounting flush or stacked. Molded locating boss positions and locks connector in place on unit when flush mounted - boss accurately lines up and positions connectors together in stack mounting.

ALDEN PRODUCTS COMPANY

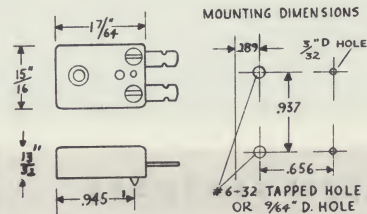
3A
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SPECIFICATIONS



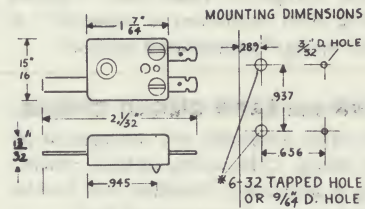
MALE 462MS

FLOATING-CLIP ACTION, wide-mating tolerances.
 COLOR-CODING for instant lead identification.
 ACCESSIBLE SOLDER-TERMINALS for easy wiring and servicing.
 MOLDED BOSS for positioning in flush or stack mounting.
 MATERIAL - molded in grey phenolic.
 CONTACT RATING - 20 amps.



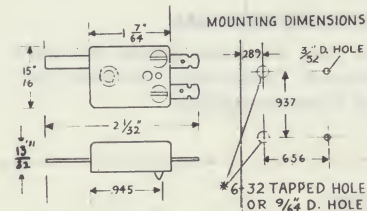
FEMALE 462FS

GENEROUS BELL-MOUTH ENTRIES - wide-mating tolerances.
 COLOR-CODING for instant lead identification.
 ACCESSIBLE SOLDER-TERMINALS for easy wiring and servicing.
 MOLDED BOSS for positioning in flush or stack mounting.
 MATERIAL - molded in grey phenolic.
 CONTACT RATING - 20 amps.



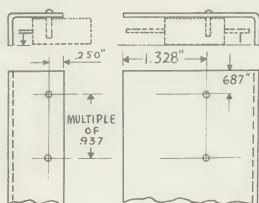
HERMAPHRODITE 462MSRH

Alden Back Connector with solder terminals projecting from back of connector. Male prong in right-hand front pocket, female clip in left-hand front pocket. (Front view)



HERMAPHRODITE 462MSLH

Alden Back Connector with solder terminals projecting from back of connector. Male prong in left-hand front pocket, female clip in right-hand front pocket. (Front view)

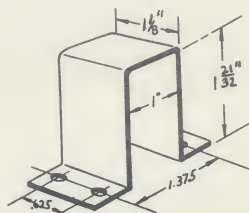


LUCITE GUARD 9009-4-412

Where it is desired to protect the exposed contacts of the back connectors, the Alden Lucite Guard is available.

TO ORDER

Specify the Number of Back Connectors to be Mounted Side by Side.



STACKING STRAP 462S-4 *

When stacking more than three back connectors, the Alden Stacking Strap can be provided as shown. This strap accommodates a stack of four back connectors. *Add number of back connectors to be stacked after part number.

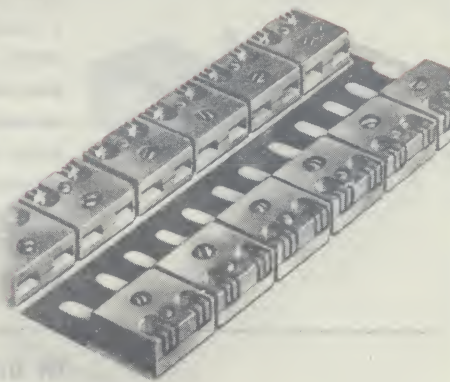
MINIATURE BACK CONNECTORS

462MIN SERIES

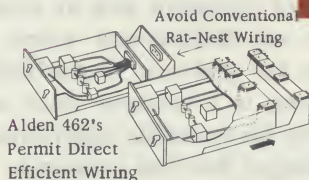
Alden Miniature Back Connectors are units that can be individually positioned on the back of chassis - isolating lines with incompatible voltages, current, or frequencies.

Design insures you accessible terminals for easy soldering and avoids rat nest of congested conventional back connector wiring. Leads can be attached from above, below or out of the back for the most direct efficient interconnects.

Wide mating tolerances compensate for sheet metal variations in chassis; therefore eliminate critical alignment problems and permit easy insertion and removal. Color coding instantly identifies leads for rapid circuit checks.

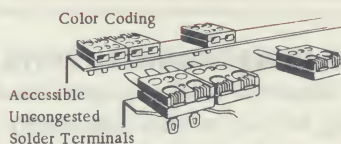


DESIGN FEATURES



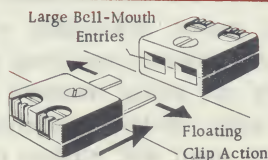
EFFICIENT CIRCUIT WIRING

Miniature connectors mounted where desired, allow for isolation of critical voltage or frequency - provide most direct wiring from component to connector - eliminate rat-nest wiring of conventional methods.



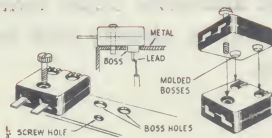
EASY SERVICING and RAPID CIRCUIT CHECKS

Solder terminals easily accessible and uncongested for multiple contact wiring. Bands of color, corresponding to lead color, permanently identify leads for easy check to main circuit or trunk line.



EASY INSERTION AND REMOVAL

Made possible by large bell-mouth entries and ample float of rugged contacts. Wide mating tolerances eliminate critical unit alignment problems.

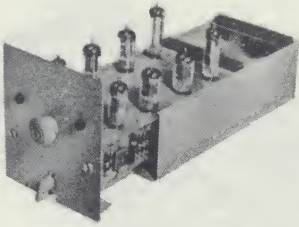


EASY MOUNTING

Single screw for mounting. Molded bosses position connectors accurately for flush or stack mounting and insulate solder terminals when brought through chassis.

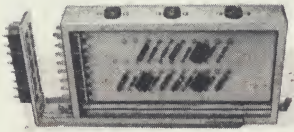
ALDEN PRODUCTS COMPANY ^{3D}/_{PI}

IN MINIATURE CHASSIS



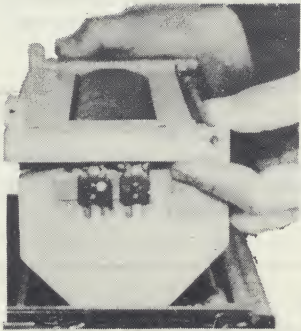
Here are the miniature back connectors in use on a small slide-in chassis used in experimental work. This unit must go together and come apart easily. Numerous contacts must be carried to rack with adequate insulation, yet wiring must be accessible and provide for rapid circuit checks. The wide mating tolerance, color-coding, and small size of the Alden Miniature Back Connector makes it ideal for this type application.

IN DECADE UNITS

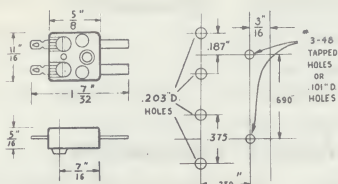


Here's the Alden Miniature Back Connector used in a plug-in decade unit. In this application a number of these units are mounted side by side. There is not enough space to exert the heavy insertion and removal leverage required with the conventional multi-contact connectors. So the Alden Miniature Back Connector with its wide-mating tolerances and floating-clip action is chosen. Moreover the problems of production wiring and servicing in a cramped space are greatly simplified by the accessible solder terminals and color-coding of this back connector.

CIRCUIT BREAK IN MECHANICAL UNITS

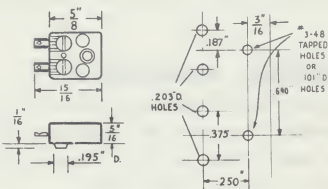


Here's the Alden Miniature Back Connector used in a machine being built up in units with electrical connection carried between the units. The connectors permit instant disassembly of the machine components without unsoldering wiring connections. They are easily mounted where needed with single screw - no troublesome mounting brackets - their small size enables use in cramped space, yet accessible solder terminals and color-coding instantly identify each lead in wiring and servicing.



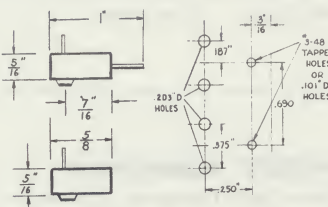
MALE 462MINMS

FLOATING-CLIP ACTION - wide mating tolerances.
 COLOR-CODING for instant lead identification.
 ACCESSIBLE SOLDER-TERMINALS for easy wiring and servicing.
 MOLDED BOSSES for positioning in flush or stack mounting.
 MATERIAL - molded in grey phenolic.
 CONTACT RATING - 15 amps.



FEMALE 462MINFS

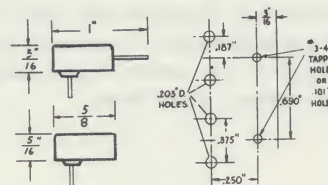
GENEROUS BELL-MOUTH ENTRIES - wide mating tolerances.
 COLOR-CODING for instant lead identification.
 ACCESSIBLE SOLDER-TERMINALS for easy wiring and servicing.
 MOLDED BOSSES for positioning in flush or stack mounting.
 MATERIAL - molded in grey phenolic.
 CONTACT RATING - 15 amps.



MALE 462MINMT

FEMALE 462MINFT

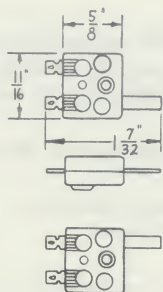
Alden Miniature Back Connector with solder terminals coming out the top of connector.
 Can be used as standoffs for components. Top solder terminals allow accessible wiring to circuit or component in cramped space.



MALE 462MINMB

FEMALE 462MINFB

Alden Miniature Back Connector with solder terminals coming out the bottom of connector.
 Molded bosses act as feed-throughs - insulate solder-terminals from chassis.
 Components or circuit wiring attached directly to terminals from underside of unit.
 Eliminates wiring on unit surface.

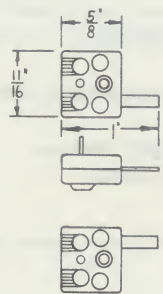


HERMAPHRODITE 462MINMSLH

Alden Miniature Back Connector with solder terminals projecting from back of connector. Male prong in left-hand front pocket, female clip in right-hand front pocket. (Front view)

HERMAPHRODITE 462MINMSRH

Alden Miniature Back Connector with solder terminals projecting from back of connector. Male prong in right-hand front pocket, female clip in left-hand front pocket. (Front view)

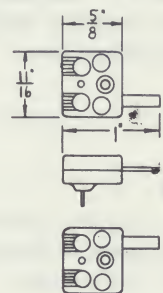


HERMAPHRODITE 462MINMTLH

Alden Miniature Back Connector with solder terminals projecting from top of connector. Male prong in left-hand front pocket, female clip in right-hand front pocket. (Front view)

HERMAPHRODITE 462MINMTRH

Alden Miniature Back Connector with solder terminals projecting from top of connector. Male prong in right-hand front pocket, female clip in left-hand front pocket. (Front view)



HERMAPHRODITE 462MINMBLH

- Alden Miniature Back Connector with solder terminals projecting from bottom of connector. Male prong in left-hand front pocket, female clip in right-hand front pocket. (Front view)

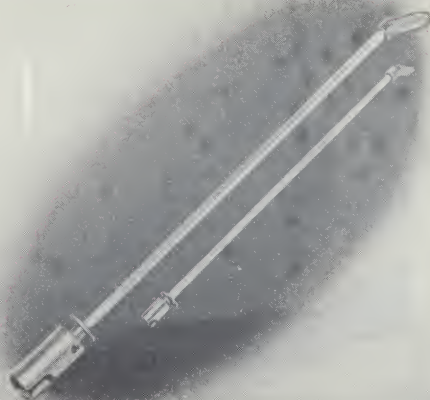
HERMAPHRODITE 462MINMBRH

Alden Miniature Back Connector with solder terminals projecting from bottom of connector. Male prong in right-hand front pocket, female clip in left-hand front pocket. (Front view)

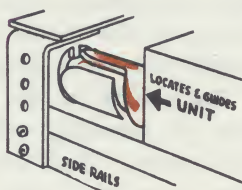
ALDEN "SERVE-A-UNIT" LOCK

The Alden "Serve-A-Unit" Lock is a quick piloting, locking, and ejecting mechanism designed to make plug-in units speedily accessible for checking, servicing or replacement. It was first developed for the easy conversion of standard rack mounting chassis into the slide-in, plug-in type chassis. It has proved equally adaptable in light miniature electronic chassis, to heavy mechanical units. It can be used equally well when units are held vertically - or in any plane.

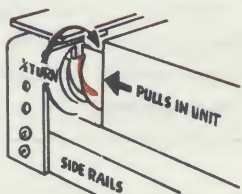
Pat. Pending



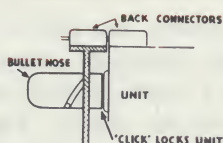
HERE'S HOW IT WORKS



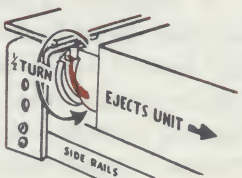
Generous bullet nose pilots unit into alignment - compensates for variations in sheet metal tolerances.



Half turn (180 degrees) of handles pulls in unit to final engagement - easily overcomes any final seating force or the heavy contact insertion pressure of conventional multi-contact back connectors.



Locks in when inserted - provides positive locking action in any position or plane whether in light miniature chassis or heavy mechanical units.

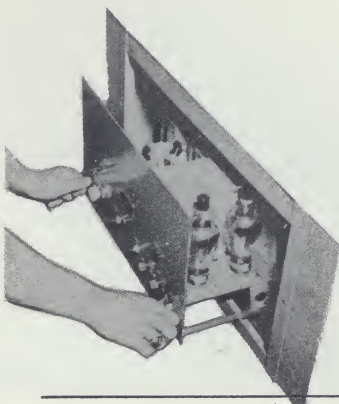


Another half turn of handles unlocks and ejects chassis - overcomes heavy mating inertia or the strong contact retention force of conventional multi-contact back connectors.

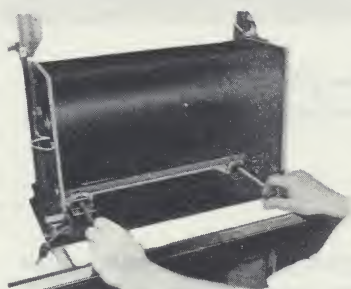
ALDEN PRODUCTS COMPANY

4A
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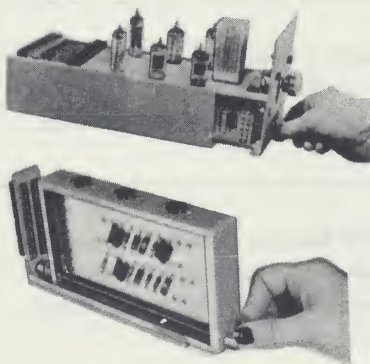
APPLICATIONS



Standard rack mounting chassis converts to easily accessible slide-in, lock-in type chassis. Two small handles on front of chassis operate twin "Serve-A-Unit" Locks - which pilot, pull-in, lock or eject chassis with 1/2 turn of handles. In this case, Alden Color-Coded, Back Connectors make and break circuit, identify each lead.

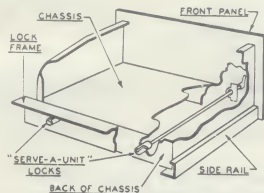


Here's a heavy mechanical unit that uses the Alden "Serve-A-Unit" Locks making it readily accessible for maintenance or replacement. The casting for this 18" facsimile recorder has mounting studs for the "Serve-A-Unit" Locks. These lock the recorder against a stop frame upon insertion of the unit. Although locked firmly in operating position, a 1/2 twist of the 2 handles will quickly free recorder for change-overs in operating mechanisms.

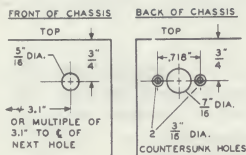


Small, light chassis and plug-in units can use the Alden Miniature "Serve-A-Unit" Lock. Here's a small electronic chassis and a miniature decade chassis. The piloting action of the Miniature "Serve-A-Unit" Lock compensates for variations in sheet metal tolerances and lines up the back connector contacts. Half twist of handle overcomes the back connector insertion force and locks chassis in operating position - always ready for instant removal or replacement.

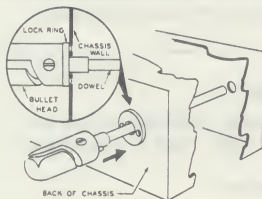
INSTALLATION



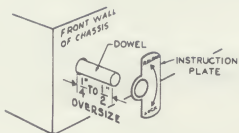
The principles of installing the Alden "Serve-a-Unit" are the same in a wide variety of chassis, and also where used on mechanical units. To illustrate, the principal installation procedure for a standard chassis is outlined here.



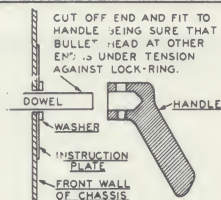
As a first step, holes are drilled in chassis for the dowel of the "Serve-a-Unit" lock. Where the Alden Lock Frame is to be used for the back stop, the height of holes from top of chassis is fixed (as noted) to match the Lock Frame. The spacing apart of the holes should be a multiple of 3.1" to match Lock Frame. This will still allow sufficient room for chassis components mounted under chassis in almost every case.



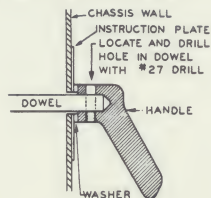
When the holes have been drilled, the lock ring is slipped into alignment with the holes in the back of chassis and held while the dowel of the "Serve-a-Unit" lock is inserted through the chassis. Where two locks are used, as in this case, be sure to place left hand and right hand dowels in proper holes. The "bullet head" is marked for this purpose.



When the dowel is in place, slip instruction plate and washer over the dowel protruding through the front panel. This dowel you may order to length. This length should be 1/4" to 1/2" oversize to allow for wandering tolerances in sheet metal and sheet metal working.



Pushing the bullet head against the lock-ring on the back side of chassis, the handle should be fitted on front. The handle must hold the rod so the pressure of the bullet head on the locking ring in back side is maintained. Therefore the dowel length may have to be trimmed.

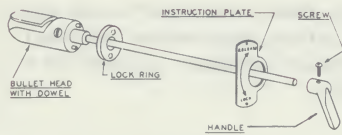


After dowel is trimmed, fit handle over dowel. Use prick punch through hole in handle to locate drill point in dowel. Remove handle and drill hole in dowel with #27 drill. Replace handle and insert pin screw tight.

ALDEN PRODUCTS COMPANY

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PI

SPECIFICATIONS



SERVE-A-UNIT LOCK

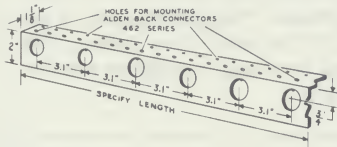
Left-hand assembly - **11019-3A LH**

Right-hand assembly - **11019-3ARH**

For use in large size units, pilots chassis in and out with facility.

TO ORDER

Specify overall outside dimensions from front to back wall of chassis or unit. (We will furnish proper dowel length to accommodate handle and compensate for sheet metal tolerances).



LOCK FRAME 11019-2-2A

For mounting across back of rack--has continuous lock holes spaced 3.1" apart to receive Serve-A-Unit bullet head. Top has continuous punched holes to take Alden Back Connectors, 462 Series. Frame is steel--grey enamel finish.

TO ORDER

Frame is available in continuous lengths to your specifications. For any given chassis, specify overall width and height and we will furnish frame to correct width (1/8" wider than chassis).

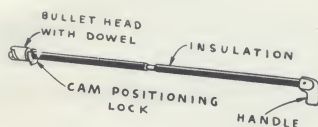


UNIVERSAL BRACKET BR-11

For holding lock frame to side rails. Adjustable for use with chassis of 1-1/2", 2", and 3" heights. Bracket is steel--grey enamel finish.

TO ORDER - Specify part number.

SPECIFICATIONS



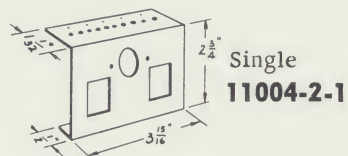
Left-Hand **11005-3LA**
Right-Hand **11005-3RA**

MINIATURE SERVE-A-UNIT LOCK

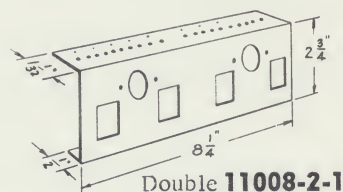
For locking and ejecting smaller type plug-in units such as the Alden Basic Chassis.

TO ORDER

Specify overall outside dimensions from front to back wall of chassis or unit. (We will furnish proper dowel length to accommodate handle and compensate for sheet metal tolerances.)



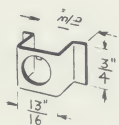
Single
11004-2-1



Double **11008-2-1**

BACK PLATE

Here are the Back Plates that enable you to organize and bring out circuit leads and connections to a central point for connecting to chassis. Cam socket is spot welded into place for receiving Miniature Serve-A-Unit Lock. Holes are pre-punched across top for mounting Miniature Back Connectors. These Back Connectors bring out leads where they should for most direct efficient wiring and check. (See pages 3A, B, C - Sec. PI).



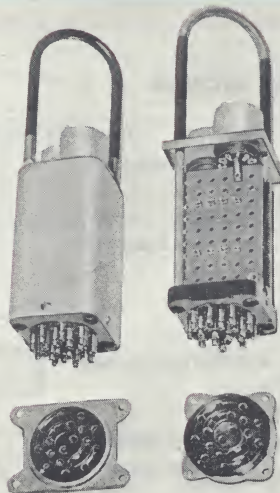
CAM SOCKET 11005-2-2

Spot welds to back plate -- receives Miniature Serve-A-Unit Lock. Nose of lock fits in cam to hold chassis firmly and securely.

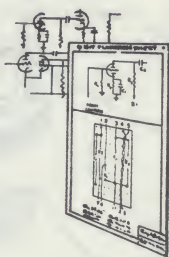
ALDEN "20" OPEN AND SHIELDED PLUG-IN PACKAGES

Here are the Alden "20" Open and Shielded Plug-In Packages. They can be the answer to the majority of your circuit unitizing requirements.

These packages amazingly simplify equipment construction and circuitry layout--give wide mounting flexibility--and speed assembly. In completed equipment, because they are accessible, they can easily be checked, removed and replaced therefore making possible remarkably simple service and maintenance.



DESIGN FEATURES



Organize Circuits Quickly for Systematic Layout and Construction

Schematics of most electronic equipment can be broken down into circuit blocks of logically associated functions and quickly laid out on full scale Unit Planning Sheets for mounting on special pre-punched multi-hole terminal cards. These special cards have wide flexibility to take an infinite number of circuit variations.



Get the Most Natural Easy Sub-Division of Labor in Manufacture

Solder Terminals and sockets quickly rivet to the terminal card according to layout on Unit Planning Sheet. Components snap into special Alden Miniature Terminals which hold them for soldering. Wiring and soldering of circuit is an open, easy-to-work sub-assembly operation.



Insure the Lowest Operational and Service Costs in Final Equipment

Completed, the Plug-in Package makes the elements of equipment easily accessible replaceable units. In operation, visual or instrument checks are easily made. Spare units can be plugged in so equipment doesn't have to be inoperable if repairs are necessary.

ALDEN PRODUCTS COMPANY **5A**
PI

ALDEN "20" OPEN PACKAGE CONSTRUCTION

TUBE SOCKETS



#407SMA Seven pin tube socket with stud and eyelet



#409SMA Nine pin tube socket with stud and eyelet



BAILS Complete with Screws

#H10020-4A for single card assembly

#H10020-5A for double card assembly

Color Coded insulating tubing available as specified see Page 6A Sec. PI.

LIDS



#L10020 takes no tube sockets



#L10020-77 takes two 7 pin tube sockets



#L10020-7 takes one 7 pin tube socket



#L10020-79 takes one 9 and one 7 pin tube socket.



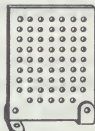
#L10020-9 takes one 9 pin tube socket



#L10020-99 takes two 9-pin tube sockets

Add "SA" for tube shield base.

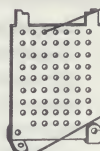
TERMINAL MOUNTING CARDS



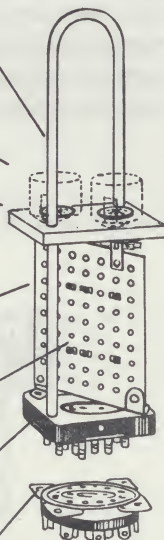
#650-20-1A for single card assembly with two tube sockets



#650-20-2A for double card assembly



#650-20-3A for single card assembly with only one tube socket



MINIATURE TERMINALS



#651T Miniature double end



#653T Double end ratchet action



#652T Miniature single end



#654T Single end ratchet action

For complete information see Page 10A Section PI.

ALDEN "20" NON-INTERCHANGEABLE BASE



#100Q-20 Series - For complete information on how to vary pin layout and make Non-Interchangeable, see Page 7C Section PI.

ALDEN "20" NON-INTERCHANGEABLE SOCKETS



400-20 Series - Chassis Mounting Socket takes minimum of space on chassis.



400LG-20 Series - Rack Mounting Socket. Whole banks can be built up on "U" channels.

Pin layout should be specified to agree with Base. For complete information on how to make Non-Interchangeable and have variable clip retention force see Page 7C Section PI.

Any package can be constructed from these basic components. For minimum inventory, order basic components by part number.

ALDEN "20" SHIELDED PACKAGE CONSTRUCTION

TUBE SOCKETS



#407SMA Seven pin tube socket with stud and eyelet



#409SMA Nine pin tube socket with stud and eyelet

BAIL



#H10020-2A For all assemblies - complete with screws
Color Coded insulating tubing available as specified see Page 6A Sec. PI.

HOUSINGS

Complete with 4 Screws



#C10020-A takes no tube sockets



#C10020-77A takes two 7 pin tube sockets



#C10020-7A takes one 7 pin tube socket



#C10020-79A takes one 9 and one 7 pin tube socket.



#C10020-9A takes one 9 pin tube socket



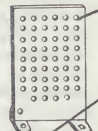
#C10020-99A takes two 9 pin tube sockets

Add "S" for tube shield bases. Add "H" for Bail Holes.
Housings can be anodized as specified.

TERMINAL MOUNTING CARDS



#650-20-1A for single card assembly



#650-20-2A for double card assembly

MINIATURE TERMINALS



#651T Miniature double end



#653T Double end ratchet action



#652T Miniature single end



#654T Single end ratchet action

For complete information see Page 10A Section PI.

ALDEN "20" NON-INTERCHANGEABLE BASE



ALDEN "20" NON-INTERCHANGEABLE BASE
100Q-20 Series - For complete information on how to vary pin layout and make Non-Interchangeable, see Page 7C Section PI.

ALDEN "20" NON-INTERCHANGEABLE SOCKETS



400-20 Series - Chassis Mounting Socket takes minimum of space on chassis.



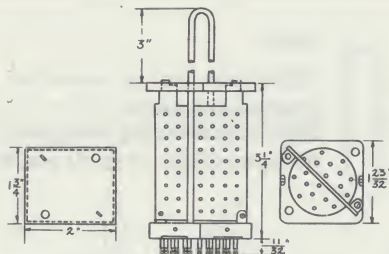
400LG-20 Series - Rack Mounting Socket. Whole banks can be built up on "U" channels.
Pin layout should be specified to agree with Base. For complete information on how to make Non-Interchangeable and have variable clip retention force see Page 7C Section PI.

Any package can be constructed from these basic components. For minimum inventory, order basic components by part number.

ALDEN PRODUCTS COMPANY

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PI

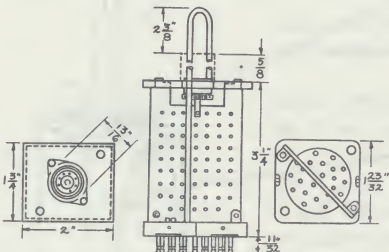
SPECIFICATIONS OPEN PLUG-IN PACKAGES



10,020Q-1T-HL — Single Card No Tube Sockets

Standard package has (1) terminal card, (20) unstaked miniature terminals #652T, (1) Alden 20 pin Non-Interchangeable base #100Q-20 Series, (1) bail, (1) top cover plate.

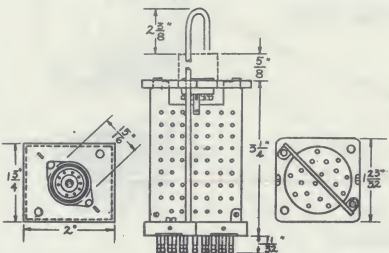
For terminals staked, add "A" to package number and indicate on Unit Planning Sheet type and holes in which they are to be staked. See Page 1D Section PI for instructions. Specify Alden "20" Non-Interchangeable socket separately; it is not part of the package. For information on how to order Non-Interchangeable Base and Sockets with variable pin pattern, see Page 7C Section PI.



10,020Q-1T-7HL — Miniature 7 Pin Tube Socket on Single Card

Standard package has (1) terminal card, (20) unstaked miniature terminals #652T, (1) 7 pin miniature tube socket, (1) Alden 20 pin Non-Interchangeable base #100Q-20 Series, (1) bail, (1) top cover plate.

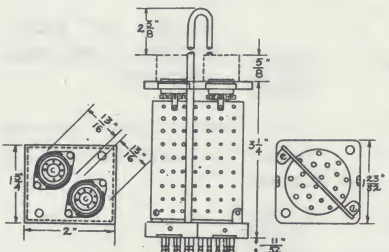
Add "S" to package number for tube shield base riveted to top cover plate. For terminals staked, add "A" to package number and indicate on Unit Planning Sheet type and holes in which they are to be staked. See Page 1D Section PI for instructions. Specify Alden "20" Non-Interchangeable socket separately; it is not part of the package. For information on how to order Non-Interchangeable Base and Sockets with variable pin pattern, see Page 7C Section PI.



10,020Q-1T-9HL — Miniature 9 Pin Tube Socket on Single Card

Standard package has (1) terminal card, (20) unstaked miniature terminals #652T, (1) 9 pin miniature tube socket, (1) Alden 20 pin Non-Interchangeable base #100Q-20 Series, (1) bail, (1) top cover plate.

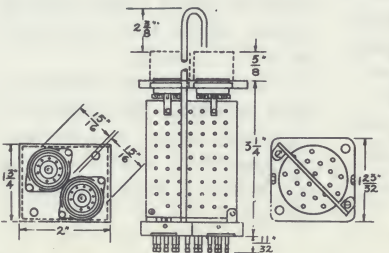
Add "S" to package number for tube shield base riveted to top cover plate. For terminals staked, add "A" to package number and indicate on Unit Planning Sheet type and holes in which they are to be staked. See Page 1D Section PI for instructions. Specify Alden "20" Non-Interchangeable socket separately; it is not part of the package. For information on how to order Non-Interchangeable Base and Sockets with variable pin pattern, see Page 7C Section PI.



10,020Q-1T-77HL — Two Miniature 7 Pin Tube Sockets on Single Card

Standard package has (1) terminal card, (20) unstaked miniature terminals #652T, (2) 7 pin miniature tube sockets, (1) Alden 20 pin Non-Interchangeable base #100Q-20 Series (1) bail, (1) top cover plate.

Add "S" to package number for tube shield base riveted to top cover plate. For terminals staked, add "A" to package number and indicate on Unit Planning Sheet type and holes in which they are to be staked. See Page 1D Section PI for instructions. Specify Alden "20" Non-Interchangeable socket separately; it is not part of the package. For information on how to order Non-Interchangeable Base and Sockets with variable pin pattern, see Page 7C Section PI.

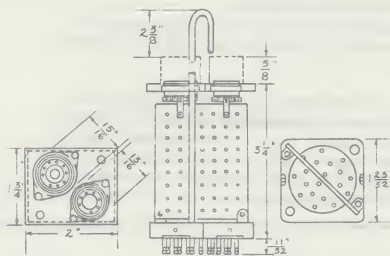


10,020Q-1T-99HL — Two Miniature 9 Pin Tube Sockets on Single Card

Standard package has (1) terminal card, (20) unstaked miniature terminals #652T, (2) 9 pin miniature tube sockets, (1) Alden 20 pin Non-Interchangeable base #100Q-20 Series, (1) bail, (1) top cover plate.

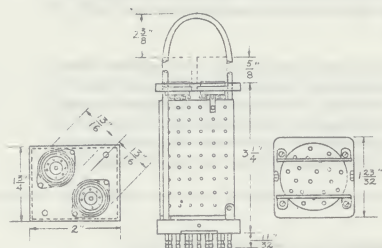
Add "S" to package number for tube shield base riveted to top cover plate. For terminals staked, add "A" to package number and indicate on Unit Planning Sheet type and holes in which they are to be staked. See Page 1D Section PI for instructions. Specify Alden "20" Non-Interchangeable socket separately; it is not part of the package. For information on how to order Non-Interchangeable Base and Sockets with variable pin pattern, see Page 7C Section PI.

SPECIFICATIONS OPEN PLUG-IN PACKAGES



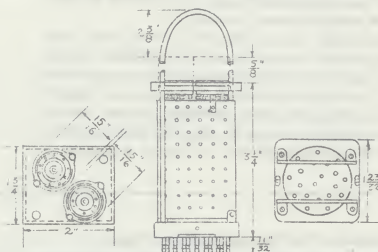
10,020Q-1T-79HL — Miniature 7 and 9 Pin Tube Sockets on Single Card
Standard package has (1) terminal card, (20) unstaked miniature terminals #652T, (1) 7 and (1) 9 pin miniature tube socket, (1) Alden 20 pin Non-Interchangeable base #100Q-20 Series, (1) bail, (1) top cover plate.

Add "S" to package number for tube shield base riveted to top cover plate. For terminals staked, add "A" to package number and indicate on Unit Planning Sheet type and holes in which they are to be staked. See Page 1D Section PI for instructions. Specify Alden "20" Non-Interchangeable socket separately; it is not part of the package. For information on how to order Non-Interchangeable Base and Sockets with variable pin pattern, see Page 7C Section PI.



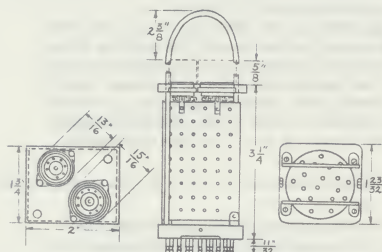
10,020Q-2T-77HL — Two Miniature 7 Pin Tube Sockets on Double Card
Standard package has (2) terminal cards, (32) unstaked miniature terminals #652T, (2) 7 pin miniature tube sockets, (1) Alden 20 pin Non-Interchangeable base #100Q-20 Series, (1) bail, (1) top cover plate.

Add "S" to package number for tube shield base riveted to top cover plate. For terminals staked, add "A" to package number and indicate on Unit Planning Sheet type and holes in which they are to be staked. See Page 1D Section PI for instructions. Specify Alden "20" Non-Interchangeable socket separately; it is not part of the package. For information on how to order Non-Interchangeable Base and Sockets with variable pin pattern, see Page 7C Section PI.



10,020Q-2T-99HL — Two Miniature 9 Pin Tube Sockets on Double Card
Standard package has (2) terminal cards, (32) unstaked miniature terminals #652T, (2) 9 pin miniature tube sockets, (1) Alden 20 pin Non-Interchangeable base #100Q-20 Series, (1) bail, (1) top cover plate.

Add "S" to package number for tube shield base riveted to top cover plate. For terminals staked, add "A" to package number and indicate on Unit Planning Sheet type and holes in which they are to be staked. See Page 1D Section PI for instructions. Specify Alden "20" Non-Interchangeable socket separately; it is not part of the package. For information on how to order Non-Interchangeable Base and Sockets with variable pin pattern, see Page 7C Section PI.



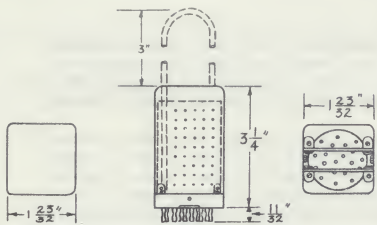
10,020Q-2T-79HL — Miniature 7 and 9 Pin Tube Sockets on Double Card
Standard package has (2) terminal cards, (32) unstaked miniature terminals #652T, (1) 7 and (1) 9 pin miniature tube socket, (1) Alden 20 pin Non-Interchangeable base #100Q-20 Series, (1) bail, (1) top cover plate.

Add "S" to package number for tube shield base riveted to top cover plate. For terminals staked, add "A" to package number and indicate on Unit Planning Sheet type and holes in which they are to be staked. See Page 1D Section PI for instructions. Specify Alden "20" Non-Interchangeable socket separately; it is not part of the package. For information on how to order Non-Interchangeable Base and Sockets with variable pin pattern, see Page 7C Section PI.

ALDEN PRODUCTS COMPANY

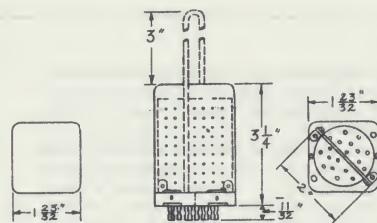
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SPECIFICATIONS SHIELDED PLUG-IN PACKAGES



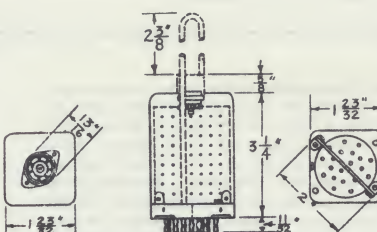
10,020Q-2TC — Double Cord No Tube Sockets
Standard package has (2) terminal cards, (32) unstaked miniature terminals #652T, (1) Alden 20 pin Non-Interchangeable base #100Q-20 Series, (1) housing.

plate. Add "H" to assembly number for ball. For terminals staked, add "A" to package number and indicate type and holes in which they are to be staked. See Page 1D Section PI for instructions. Specify Alden "20" Non-Interchangeable socket separately; it is not part of the package. For information on how to order Non-Interchangeable Base and Sockets with variable pin pattern, see Page 7C Section PI.



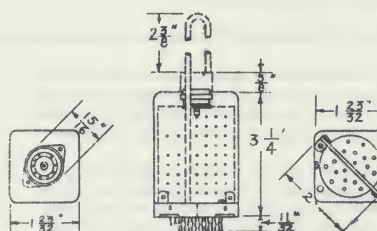
10,020Q-1TC — Single Cord No Tube Sockets
Standard package has (1) terminal card, (20) unstaked miniature terminals #652T, (1) Alden 20 pin Non-Interchangeable base #100Q-20 Series, (1) housing.

plate. Add "H" to assembly number for ball. For terminals staked, add "A" to package number and indicate type and holes in which they are to be staked. See Page 1D Section PI for instructions. Specify Alden "20" Non-Interchangeable socket separately; it is not part of the package. For information on how to order Non-Interchangeable Base and Sockets with variable pin pattern, see Page 7C Section PI.



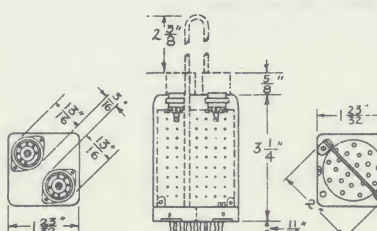
10,020Q-177C — Miniature 7 Pin Tube Socket on Single Cord
Standard package has (1) terminal card, (20) unstaked miniature terminals #652T, (1) 7 pin miniature tube socket, (1) Alden 20 pin Non-Interchangeable base #100Q-20 Series, (1) housing.

Add "S" to package number for tube shield base riveted to top cover plate. Add "H" to assembly number for ball. For terminals staked, add "A" to package number and indicate type and holes in which they are to be staked. See Page 1D Section PI for instructions. Specify Alden "20" Non-Interchangeable socket separately; it is not part of the package. For information on how to order Non-Interchangeable Base and Sockets with variable pin pattern, see Page 7C Section PI.



10,020Q 179C — Miniature 9 Pin Tube Socket on Single Cord
Standard package has (1) terminal card, (20) unstaked miniature terminals #652T, (1) 9 pin miniature tube socket, (1) Alden 20 pin Non-Interchangeable base #100Q-20 Series, (1) housing.

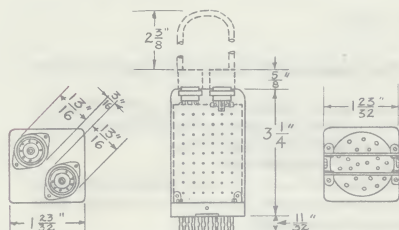
Add "S" to package number for tube shield base riveted to top cover plate. Add "H" to assembly number for ball. For terminals staked, add "A" to package number and indicate type and holes in which they are to be staked. See Page 1D Section PI for instructions. Specify Alden "20" Non-Interchangeable socket separately; it is not part of the package. For information on how to order Non-Interchangeable Base and Sockets with variable pin pattern, see Page 7C Section PI.



10,020Q-1777C — Two Miniature 7 Pin Tube Sockets on Single Cord
Standard package has (1) terminal card, (20) unstaked miniature terminals #652T, (2) 7 pin miniature tube sockets (1) Alden 20 pin Non-Interchangeable base #100Q-20 Series, (1) housing.

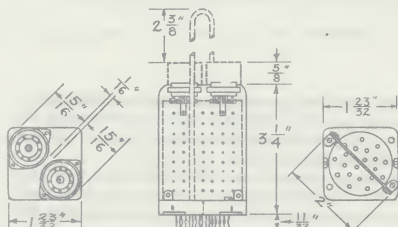
Add "S" to package number for tube shield base riveted to top cover plate. Add "H" to assembly number for ball. For terminals staked, add "A" to package number and indicate type and holes in which they are to be staked. See Page 1D Section PI for instructions. Specify Alden "20" Non-Interchangeable socket separately; it is not part of the package. For information on how to order Non-Interchangeable Base and Sockets with variable pin pattern, see Page 7C Section PI.

SPECIFICATIONS SHIELDED PLUG-IN PACKAGES



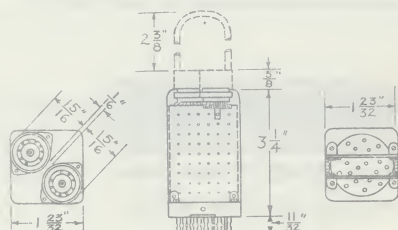
10,020Q-2T77C — Two Miniature 7 Pin Tube Sockets on Double Card
Standard package has (2) terminal cards, (32) unstaked miniature terminals #652T, (2) 7 pin miniature tube sockets, (1) Alden 20 pin Non-Interchangeable base #100Q-20 Series, (1) housing.

Add "S" to package number for tube shield base riveted to top cover plate. Add "H" to assembly number for bail. For terminals staked, add "A" to package number and indicate type and holes in which they are to be staked. See Page 1D Section PI for instructions. Specify Alden "20" Non-Interchangeable socket separately; it is not part of the package. For information on how to order Non-Interchangeable Base and Sockets with variable pin pattern, see Page 7C Section PI.



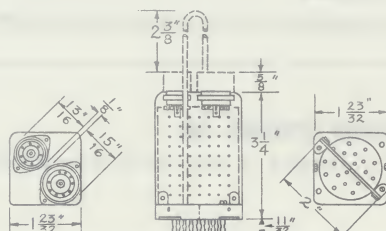
10,020Q-1T99C — Two Miniature 9 Pin Tube Sockets on Single Card
Standard package has (1) terminal card, (20) unstaked miniature terminals #652T, (2) 9 pin miniature tube sockets, (1) Alden 20 pin Non-Interchangeable base #100Q-20 Series, (1) housing.

Add "S" to package number for tube shield base riveted to top cover plate. Add "H" to assembly number for bail. For terminals staked, add "A" to package number and indicate type and holes in which they are to be staked. See Page 1D Section PI for instructions. Specify Alden "20" Non-Interchangeable socket separately; it is not part of the package. For information on how to order Non-Interchangeable Base and Sockets with variable pin pattern, see Page 7C Section PI.



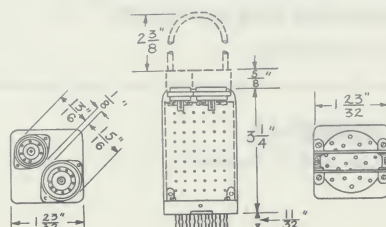
10,020Q-2T99C — Two Miniature 9 Pin Tube Sockets on Double Card
Standard package has (2) terminal cards, (32) unstaked miniature terminals #652T, (2) 9 pin miniature tube sockets, (1) Alden 20 pin Non-Interchangeable base #100Q-20 Series, (1) housing.

Add "S" to package number for tube shield base riveted to top cover plate. Add "H" to assembly number for bail. For terminals staked, add "A" to package number and indicate type and holes in which they are to be staked. See Page 1D Section PI for instructions. Specify Alden "20" Non-Interchangeable socket separately; it is not part of the package. For information on how to order Non-Interchangeable Base and Sockets with variable pin pattern, see Page 7C Section PI.



10,020Q-1T79C — Miniature 7 and 9 Pin Tube Sockets on Single Card
Standard package has (1) terminal card, (20) unstaked miniature terminals #652T, (1) 7 and (1) 9 pin miniature tube socket, (1) Alden 20 pin Non-Interchangeable base #100Q-20 Series, (1) housing.

Add "S" to package number for tube shield base riveted to top cover plate. Add "H" to assembly number for bail. For terminals staked, add "A" to package number and indicate type and holes in which they are to be staked. See Page 1D Section PI for instructions. Specify Alden "20" Non-Interchangeable socket separately; it is not part of the package. For information on how to order Non-Interchangeable Base and Sockets with variable pin pattern, see Page 7C Section PI.



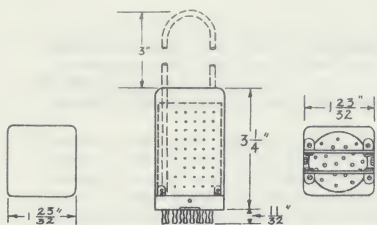
10,020Q-2T79C — Miniature 7 and 9 Pin Tube Sockets on Double Card
Standard package has (2) terminal cards, (32) unstaked miniature terminals #652T, (1) 7 and (1) 9 pin miniature tube socket, (1) Alden 20 pin Non-Interchangeable base #100Q-20 Series, (1) housing.

Add "S" to package number for tube shield base riveted to top cover plate. Add "H" to assembly number for bail. For terminals staked, add "A" to package number and indicate type and holes in which they are to be staked. See Page 1D Section PI for instructions. Specify Alden "20" Non-Interchangeable socket separately; it is not part of the package. For information on how to order Non-Interchangeable Base and Sockets with variable pin pattern, see Page 7C Section PI.

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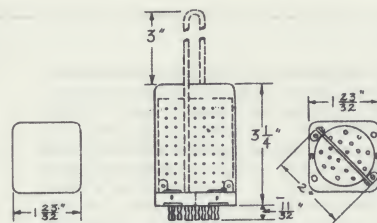
**5G
PI**

SPECIFICATIONS SHIELDED PLUG-IN PACKAGES



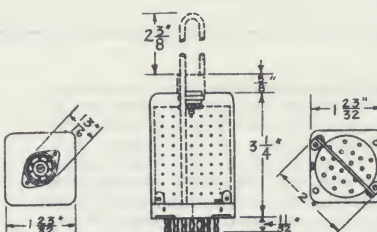
10,020Q-2TC — Double Card No Tube Sockets
Standard package has (2) terminal cards, (32) unstaked miniature terminals #652T, (1) Alden 20 pin Non-Interchangeable base #100Q-20 Series, (1) housing.

plate. Add "H" to assembly number for bail. For terminals staked, add "A" to package number and indicate type and holes in which they are to be staked. See Page 1D Section PI for instructions. Specify Alden "20" Non-Interchangeable socket separately; it is not part of the package. For information on how to order Non-Interchangeable Base and Sockets with variable pin pattern, see Page 7C Section PI.



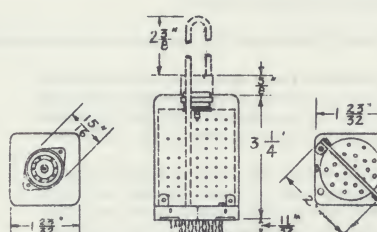
10,020Q-1TC — Single Card No Tube Sockets
Standard package has (1) terminal card, (20) unstaked miniature terminals #652T, (1) Alden 20 pin Non-Interchangeable base #100Q-20 Series, (1) housing.

plate. Add "H" to assembly number for bail. For terminals staked, add "A" to package number and indicate type and holes in which they are to be staked. See Page 1D Section PI for instructions. Specify Alden "20" Non-Interchangeable socket separately; it is not part of the package. For information on how to order Non-Interchangeable Base and Sockets with variable pin pattern, see Page 7C Section PI.



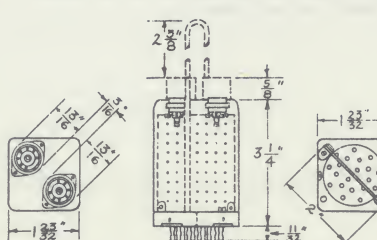
10,020Q-177C — Miniature 7 Pin Tube Socket on Single Card
Standard package has (1) terminal card, (20) unstaked miniature terminals #652T, (1) 7 pin miniature tube socket, (1) Alden 20 pin Non-Interchangeable base #100Q-20 Series, (1) housing.

Add "S" to package number for tube shield base riveted to top cover plate. Add "H" to assembly number for bail. For terminals staked, add "A" to package number and indicate type and holes in which they are to be staked. See Page 1D Section PI for instructions. Specify Alden "20" Non-Interchangeable socket separately; it is not part of the package. For information on how to order Non-Interchangeable Base and Sockets with variable pin pattern, see Page 7C Section PI.



10,020Q 179C — Miniature 9 Pin Tube Socket on Single Card
Standard package has (1) terminal card, (20) unstaked miniature terminals #652T, (1) 9 pin miniature tube socket, (1) Alden 20 pin Non-Interchangeable base #100Q-20 Series, (1) housing.

Add "S" to package number for tube shield base riveted to top cover plate. Add "H" to assembly number for bail. For terminals staked, add "A" to package number and indicate type and holes in which they are to be staked. See Page 1D Section PI for instructions. Specify Alden "20" Non-Interchangeable socket separately; it is not part of the package. For information on how to order Non-Interchangeable Base and Sockets with variable pin pattern, see Page 7C Section PI.

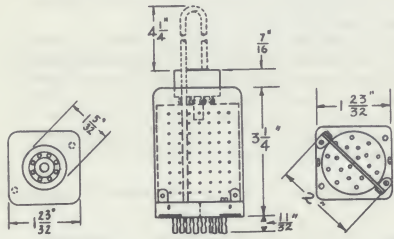


10,020Q-1777C — Two Miniature 7 Pin Tube Sockets on Single Card
Standard package has (1) terminal card, (20) unstaked miniature terminals #652T, (2) 7 pin miniature tube sockets (1) Alden 20 pin Non-Interchangeable base #100Q-20 Series, (1) housing.

Add "S" to package number for tube shield base riveted to top cover plate. Add "H" to assembly number for bail. For terminals staked, add "A" to package number and indicate type and holes in which they are to be staked. See Page 1D Section PI for instructions. Specify Alden "20" Non-Interchangeable socket separately; it is not part of the package. For information on how to order Non-Interchangeable Base and Sockets with variable pin pattern, see Page 7C Section PI.

SPECIFICATIONS OCTAL PLUG-IN PACKAGES

These Kits take the majority of octal tubes.
Special bails are available to take large type tubes.



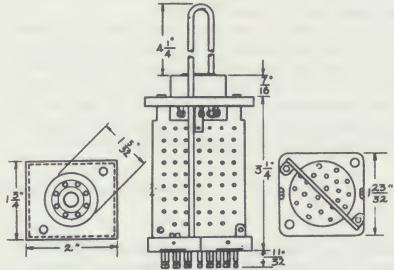
10,020 Q-1T8C Shielded With Octal Tube Socket on Single Card

Standard package has (1) terminal card, (20) unstaked miniature terminals #652T, (1) octal tube socket, (1) Alden 20-pin non-interchangeable base #100Q-20 Series, (1) housing.

Add "H" to assembly number for bail.

Add "A" to assembly number for terminals staked and indicate in which holes they are to be staked. Use handy Unit Planning Sheet Page 1C, Section PI shows you how.

Specify Alden "20" Non-Interchangeable Socket separately; it is not part of the package. Page 7C, Section PI shows you how to order Non-Interchangeable Base and Sockets with variable pin pattern.



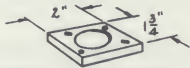
10,020 Q-1T99C — Two Miniature 9 Pin Tube Sockets on Single Card

Standard package has (1) terminal card, (20) unstaked miniature terminals #652T, (2) 9 pin miniature tube sockets, (1) Alden 20 pin Non-Interchangeable base #100Q-20 Series, (1) housing.

Add "S" to package number for tube shield base riveted to top cover plate. Add "H" to assembly number for bail. For terminals staked, add "A" to package number and indicate type and holes in which they are to be staked. See Page 1D Section PI for instructions. Specify Alden "20" Non-Interchangeable socket separately; it is not part of the package. For information on how to order Non-Interchangeable Base and Sockets with variable pin pattern, see Page 7C Section PI.

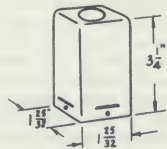
OCTAL PLUG-IN PACKAGE CONSTRUCTION

The standard basic components shown on Pages 5B-6B/PI are also standard for the Octal Plug-In Packages. The only variations being:



LID L10020-8

Has hole punched to take octal tube socket.



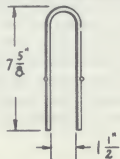
HOUSING C10020-8A

Has hole punched to take octal tube socket.



OCTAL TUBE SOCKET 408 SMA

Complete with stud and eyelet for easy mounting.



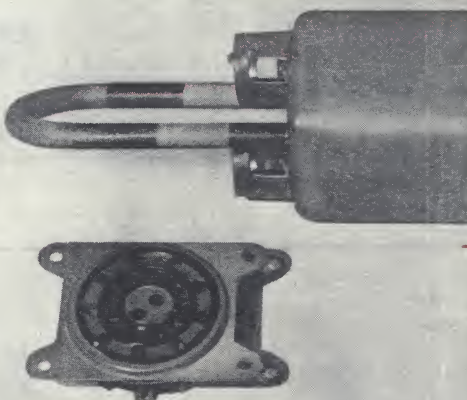
BAIL H10020-6A

Complete with 2 screws.

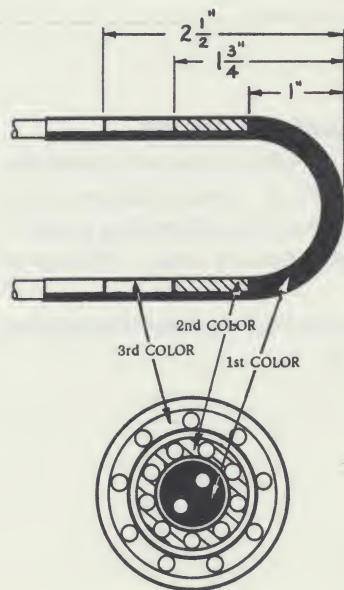
COLOR CODING

Alden offers a simple means of color coding to simplify maintenance and to prevent errors in inter-changing Alden "20" Plug-In Packages (Sec. PI, pages 5A-5H). Each functional unit in the equipment can be assigned a color code so that plug-in units can be easily and quickly matched with sockets. Colors are brilliant, contrasting and lasting. The thermoplastic insulation used in coding the handles also provides insulation against accidental faults in your equipment.

On your order for Alden "20" Plug-In Packages and Alden "20" Non-Interchangeable Sockets, specify the color schemes you want and Aldens will furnish the handles insulated and coded, and the sockets coded. Or at your option you may order from the items below the materials to do your own color coding.



DESIGN FEATURES



CUT SLEEVE AND SOCKET — COLORED

Aldens will color code the handles and sockets for you. Specify first, second and third color for the standard method of coding shown in the two diagrams at the left.

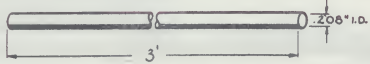
Colors available are:

Red	Yellow
White	Green
Blue	Black (Black is the natural, unpainted color of Sleeves and Sockets.)
Orange	

ALDEN PRODUCTS COMPANY

6A
PI

SPECIFICATIONS



APW 50-208

APW 50-208 UNCUT SLEEVING

Tubing is 1/32" wall of black thermoplastic material (.208" I.D.). Can be ordered any length up to 3 feet. Specify length.



APW 24

APW 24 POLYVINYL INK

Alden ink for coding handle insulation above is available in 1/2 pt. metal containers (for approximately 500 handles, depending on use). Apply by dipping insulation in the ink. Specify color. Thinner is also available.

This can be used on any thermoplastic materials (vinylite, etc.).

Red	Orange
White	Yellow
Blue	Green



APW 25

APW 25 ALDEN LACQUER

Alden lacquer for coding sockets or connectors is available in 1/2 pt. metal containers (for approximately 500 sockets, depending on use). Apply with brush. Specify color. Thinner is also available.

This can be used on any thermosetting plastics (bakelite, etc.).

Red	Orange
White	Yellow
Blue	Green